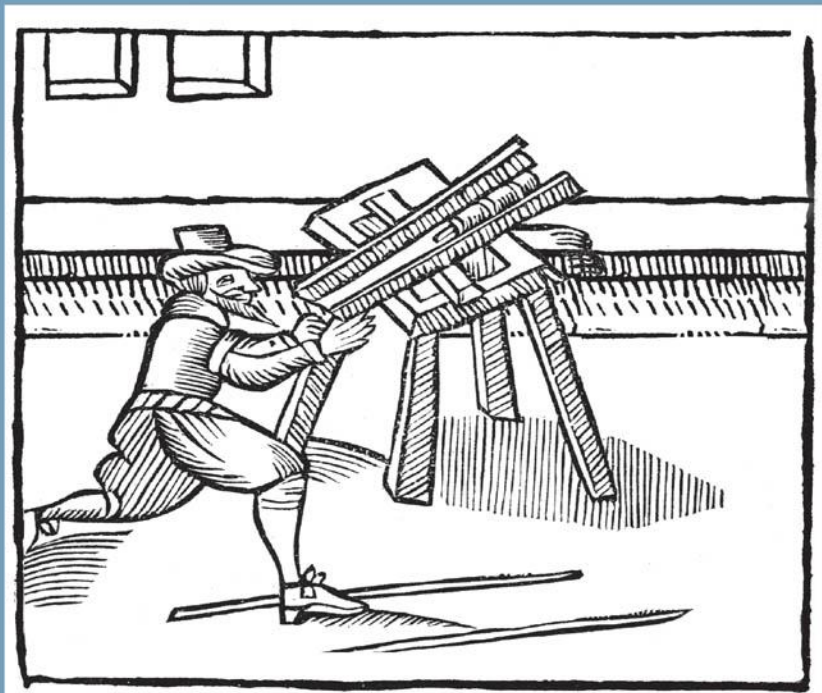


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Manmade Marvels in Medieval Culture and Literature
by Scott Lightsey

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LITERATURE

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For Debra

If in his Studie he hath so much care

To 'hang all old strange things, let his wife beware

—John Donne, *The Antiquary*

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I first felt wonder about manmade marvels when as a boy I attended a Smithsonian Institute exhibition of early *automata* titled “The Mechanical Universe.”¹ Although the hall’s occupants lay unmoving in stationary displays behind glass, the place seemed to fairly teem with automated mirabilia: a tiny monk whose cope and hood obscured the cams and wheels driving his mechanical body; whirling automatons passing across the faces of ornate clocks; gilt boats sailing on hidden gear-driven wheels; and simple manlike robots poised to ring bells. These mechanical wonders were the late, surviving exemplars of the largely lost medieval phenomenon of clockwork *automata*—the most elite form of manmade marvel from the Middle Ages. The show’s catalogue could only describe the movements of these now-defunct devices, poised on velvet behind thick glass, but I felt their immanence and potential, and a childlike desire to figure out how they worked: I wanted to figure them out and make them once again go.

This innocent sense of wonder was probably as close as I will ever get to John Mandeville’s enthusiasm for the golden peacock *automata* dancing in the court of Cathay, although in pursuing marvels I have come to wonder most of all at the people and institutions whose support has allowed me to write this book: thanks so very much to all for the opportunity to pursue the idiosyncratic delights of these strange and wonderful devices. I will try not to use the vocabulary of my subject upon those I would like to acknowledge, except to say that I marvel at your support and generosity.

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Scott Lightsey
Atlanta, November 2006

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INTRODUCTION: CLEVER DEVICES

This thing, that hath a code and not a core.

—Ezra Pound, *An Object*

The temper of human wonder is rooted in perspective, and this is especially so of the kinds of wonder circulating among the courts and cities of late medieval Europe, as artists and mechanics produced a variety of marvels to delight their courtly patrons. During this period, a vast array of marvelous objects were taken from the pages of romances and transformed by craftsmen into automated metal men and birds, musical silver trees, fantastic stage illusions, and elaborate clockworks, effecting these devices' move into the lavish and "curiously ywrought" pleasure gardens that already provided courtiers with a sumptuous physical environment of courtly magnificence. These contrivances thus were engaged intimately with chivalric culture, that culture's notions of the marvelous, and with the fashioning of courtly identity.

Manmade imitations of the magical marvels of romance amazed viewers by reproducing the kinds of marvels they had experienced in texts as part of the world of courtly experience. Gordon Kipling points out that during the Parisian *joyouse entrée* of Isabella of Bavaria in 1389, a beast fable came to life as a mechanical white stag, collared by a golden crown signifying Charles VI, which approached a magnificent bed of estate for succor from the queen.¹ Such marvels conflate text and material practices with high symbolism, heightening the emotional effect of the display upon audiences by appearing to operate contrary to natural principles, for their intricate mechanisms were shrouded to heighten the effect of wonder.

By reading such *mirabilia* as participants in their social networks, we will find that they undermine our tacit acceptance of the dictum that "any sufficiently advanced technology is indistinguishable from magic," for local readings engage multiple perspectives, complicating the idea of a singular reception for any one manmade marvel.² Further, not all of the devices commissioned to produce wonder bore out the meanings and contingencies their patrons intended; as a result, the manmade marvel could on occasion rewrite the script of the event in which it was deployed.

In 1414, Ferdinand de Antequera was crowned at Sargossa, and at the ceremony for his wife's coronation, a mechanical marvel called a pomegranate or cloud—an aerial-descent device operating on hidden mechanisms and meant to mimic preternatural arrivals by God, angels, or even demons—was deployed from the ceiling to amaze and entertain the visitors.³ As the guests ate, the cloud appeared, descending into the midst of this courtly feast. As the device hovered before the banquet tables, the figure of Death alighted and captured a jester. The victim of this marvelous performance was named Borra, a well-placed diplomat and intimate of the Crown. The *Crónica* of Juan II describes the wondrous ascent of the mechanical marvel:

When Death came in his cloud in front of the table, Borra began to scream, and the Duke led him up; Death threw down a rope, they tied it round Borra, and Death hanged him. You wouldn't believe the racket Borra made, weeping, expressing his terror, and, as he was pulled up, he urinated into his underclothes, and the urine fell on the heads of those below. He was quite convinced he was being carried off to Hell. The King marveled at this and was much amused.⁴

Poor Borra's unwitting part in the marvel's performance emphasizes the degree to which perspective plays a part in the perception of manmade *mirabilia*. This brief account of a courtly marvel immediately polarizes for us the perspectives of knowing and unknowing audiences. Some of the company clearly knew the marvel was manmade, but at least one did not, leading to the unintended consequence of the marvel taking control of the scene: Borra's urine became the ink with which this courtly marvel rewrote the dignity of the event as a bourgeoisie bawdy, reducing the carefully contrived atmosphere of courtly romance to the bathos of fabliaux.

The key role of this mechanical marvel in the ceremonial confirmation of rule clearly was intended to bolster the social capital of the complicit elites, whose magnificence would catch the reflected glory of the marvel gracing the newly crowned court; but instead of using the marvel to underscore their own magnificence, the device taught them a pungent lesson in the ways that manmade marvels of even the most elite courts could jump discourses, operating outside the contingencies of elite prerogatives.

Other perspectives on marvels lay silent in the aforementioned scenes: What of the numerous and nameless craftsmen who built and operated the contrivances? What of the middlemen who commissioned them for their elite patrons? How did their experience of this pinnacle of courtly splendor differ from that of both knowing and unknowing courtiers? And what were the spiritual implications of a mechanical

device created to mimic the operations of divine power? Ultimately each of these functional values, these abilities enacted within social registers of signification, is narrative in character. Therefore, even when the device has been lost, we may look to narrative records of these marvelous machines and their wonder-inspiring performances to determine what role these marvels played in the social scenes in which they were produced and embedded, searching for registers of meaning that remain obscure despite their compartmentalized excavation at the hands of intellectual historians, historians of technology, and a variety of other marvel-seekers who have delved into the world of medieval marvels and wonders before this book. These are questions that may be answered by following these clever devices where they lead us, tracing the now-lost culture of manmade *mirabilia*.

The Economy of Wonders

This is a book about the development and deployment of manmade marvels in the courts of later medieval Europe, a manifestation of *mirabilia* that has not been adequately explored amid the growing number of critical works on monsters, marvels, and miracles. The apparent egalitarianism of this alliterative phrase, “monsters, marvels, and miracles,” hides the ambiguity of marvels between the *extimité* of Monsters the holy gravitas of Miracles. Marvels are subsumed in the middle, an ambiguous, median position analogous to the medieval, or *medievo* as periodized by Renaissance classicists: marvels are the middle term, ambivalent, ghettoized, and perhaps least well understood. Definable neither as anthropomorphized or anatomized monsters, nor carrying the divine sanction of miracles, marvels oscillate in that equivocal space between idea and object, created neither by man nor God; perhaps this is why even studies dedicated to this fascinating trinity usually forego marvels for their more well-established cohorts, particularly monsters.⁵

Thankfully, and with no small credit to the works of Katharine Park, Lorraine Daston, Mary Baine Campbell, and Carolyn Walker Bynum, marvels and wonders are crossing the threshold from the margins of theology to become the focus of a diverse constituency among scholars and lay readers in the histories of science, literature, technology, art, intellectual history, and cultural studies. This intensification of interest in *mirabilia* has focused for the most part on scholastic, psychological, and scientific categories, and the continental cultural production of France and Italy during the Renaissance, and deserves the diversity of interest warranted by the multiplicity of the subject of marvels themselves.⁶

Readers will of course recognize the considerable debt this book owes to previous studies and sources, but the multiplicity of these foundations is the surest marker that it departs from them in key aspects of content and approach. This book stems from and responds to a growing body of work that views *mirabilia* primarily through the taxonomies provided by intellectual elites or the strictures of literary genre. By contrast, I will view specific marvels as instances of both literal and literary performance, corporate effort, and technical embodiment, often following them across traditional boundaries of class, ideology, and generic expectation to qualify the multiplicity of wonder they inspire. Little attention has been paid to the key place of manmade marvels in late medieval European culture, and this book seeks, through reading these marvels, to look behind the curtain at Oz—"behind the wainscoting" in Mary Douglas's words—at the cultural detritus of courtly prerogatives and issues that inhere in the systems behind the scenes, forming a sediment of marvelous ephemera, ambiguous objects built for the magnificent courts and civic environs of the transalpine west.

Although the reception of manmade *mirabilia* may have been conditioned in part by scholastic ideas about marvels and wonder that we will touch upon, they were very much a part of the sociopolitical world of late medieval urban courts, where manmade marvels were imagined, commissioned, crafted, experienced, and sometimes reinscribed, appearing in a diverse range of texts. This book therefore describes the roles and functions of manmade marvels through localized readings of *mirabilia* as products of human craft: clever devices whose rarefied emotional effects were deliberately engaged in the pursuit of social and political capital.⁷ Specific representations and traces of response will be analyzed accordingly, allowing any particular marvel to in essence define itself within the overlapping social fields in which it was deployed. This is therefore also a book about the traces of lost objects, whose forms were inspired and built in imitation of romance texts to provide enjoyment for—and underscore the magnificence of—wealthy patrons. Lifelike mechanical imitations of birds and trees, marvelous human forms, and even automatic fountains and boats were powered in the late thirteenth and throughout the fourteenth centuries by simple hidden machines, hydraulic engines, and complicated clockworks, their concealed mechanisms governed by hidden actors and court *tregetours*, allowing them to mirror the magical *mirabilia* depicted in romances such as the *Pèlerinage de Charlemagne* or Benoît de St. Maure's *Roman de Troie*.⁸

Earlier artificial marvels, such as the late thirteenth-century scholar Roger Bacon's flying machines and fantastic engines, were modeled on the wonders of romance as hypothetical devices "conceived as instruments of princely power," but the fourteenth and fifteenth centuries were a period of critical

shifts in the production, perception, and representation of marvels and wonders.⁹ During this period, these armchair creations emerged from the textual imaginations of scholastics such as Bacon, crossing the threshold of the phenomenal world of nascent urban courts to become the *automata*, fantastic clocks, and other performative marvels of the later medieval courts. In these magnificent precincts, elaborate timepieces, hydraulic table-fountains, and human and animal *automata* were fashioned by craftsmen for court performances, and also first spilled into public view through lavishly ornamented ridings and other public pageantry. They thus provide interesting grounds for interrogating the changing nature of wonder and the very constitution of marvels, for in this crucial period they are for the first time broadly experienced as textual-material hybrids.

To the medieval elites, the manmade marvel was a covert commodity in an economy of power and wonder. The value they put on these marvelous things was their function in what Bourdieu would term partially overlapping fields of cultural value, and what I will refer to as the economy of wonders.¹⁰ That it was an economy can be little doubted, according to definitions both traditionally monetary, as well as those describing social practices of exchange. The latter would include the culture of magnificence nascent in late medieval courts, and predicated upon the conservation and expenditure of social prestige, a resource as ephemeral and yet ideologically forceful as gold.¹¹ That the purchase of personal esteem, national security, or familial relation could be effected through the display of such marvels is a benchmark of our understanding of fourteenth- and fifteenth-century European nobility. The result is the composite projection of chivalric ideology we take for granted, yet often we ignore the conduit forces that establish the limits defining this elite subject. The link between exchange (which creates value) and value (embodied in exchanged commodities) is social politics, justifying the conceit that commodities, like persons, have social lives.¹²

Sahlins confirms that “the pragmatics of trade erodes and transforms the cultural bonds within which it is initially conceived,” and the wealth of evidence for the rapid proliferation of these marvelous devices and related technologies (from courtly *entremets* with limited audiences to public processions witnessed by thousands) confirms that “the politics of enclaving [the technology of marvels], far from being a guarantor of systemic stability, may constitute the Trojan Horse of change” (1981: 44–5). The conflation of bodies and machines, initiated by and for the elite in imitation of romance textual models was made possible by a crafts culture, a technocracy of guilds and craftsmen who could be said to have contaminated the discursive object-body of romance with a dangerous machinic interiority. We are generally guilty of assuming that the meanings established within

the discursive origin of these marvels are carried onto their corporealized bodies, that the object retains a textual identity that guarantees its object status. However, the crafts culture that mediates the transfer from discursive totality into a split subject—the “legible body” whose physicality is textually mediated, but whose corporeality is in turn carried back into the text—prevents any singular transfer of object-identity for manmade marvels.¹³ This crafts culture is the missing condition of this transfer of meaning, and the conduit for broader cultural dissemination of the idea of mechanical marvels as both social and economic commodities.

Value, according to Georg Simmel, is a judgment made about objects in which subjective valuation is at best provisional.¹⁴ Technological change thus occurs within the ambit of a cultural system of exchange; the elite taste for *mirabilia* does not simply drive production, but emerges as part of an integrated sociotechnical system of elites and craftsmen. As the forces of trade culture and the mercantile impulse grow through the thirteenth and fourteenth centuries, we see that in addition to viewing consumption as a way of sending messages, it also functions as a receptor for messages sent up the social register from the streets and workshops of urban localities, as the urban population, loosely defined, was increasingly exposed to manmade marvels through public performance and the sheer numbers of craftspeople necessary for the production of such performances. “Elite tastes, in general, have this ‘turnstile’ function [of being determined by, and in turn determining, social and economic forces], selecting from exogenous possibilities and then providing models, as well as direct political controls, for internal taste and production.”¹⁵ As a “clandestine commodity, a nefarious luxury item,” manmade marvels were produced not for the familiar nexus of medieval trade, but as a signifier of value whose existence in overlapping and occasionally contradictory fields creates multiple narratives.¹⁶ In subsequent chapters I situate them in relation to the textual representations of manmade marvels from which they came; key here is the notion that we can for the first time adequately demonstrate the connections between romance texts, courtly performances, craft ideologies, and political contexts.

Given the wealth of manmade marvels, and the lack of specific attention to English marvels amid growing interest and expanding work on continental *mirabilia*, this book focuses on readings of manmade marvels in the internationalist court life of late medieval England. Richard II fashioned his court during a period of intense reckoning with the power of lavish display, and he had good company among other European monarchs who, presiding over territories exhausted by decades of war and under social pressure from the mercantile economy flourishing across the continent, began

redirecting their energies from the old militarist model toward a program of self-consciously emphasizing the magnificence of the ruling class. The general atmosphere of the courts during the Hundred Years' War was one of impotence and excess, as rulers hampered by military fatigue and political détente strove to underline the fading magnificence of their feudal heritage by funding lavish courts and fantastic entertainments.

Within Richard II's broad affinity, I bring familiar works by Chaucer, Gower, and Langland into the conversation on marvels and wonders, often for the first time.¹⁷ For example, one of the most politically significant manmade marvels of the late fourteenth century—the golden mechanical angel perched atop Richard II's coronation pageant—is a feature of the B-Prologue of *Piers Plowman*, but is rarely noted for its inspiration in a wonder-inspiring public role; who would have thought that the meaning of a marvelous golden automaton who had handed a crown to Prince Richard would not attract attention? And what of Geoffrey Chaucer, who eschews traditional genre-based representation of the magical wonders of romance to present the marvels of the *Squire's Tale* as objects of artifice open to textual interpretation and rational investigation? Somewhat surprisingly, John Gower's political allegory in the *Confessio Amantis* also carries the traces of marvelous artifice, for the Alexander literature underlying the politics of the *Confessio Amantis* is of course rife with both magical and manmade *mirabilia*. Even in the case of marvels' most predictable textual haunt (and scholarly strip-mine), Mandeville's *Travels*, I find significant instances in which the late medieval politics of craft underlie the representation of *mirabilia*, sharpening our understanding of the structural function of key marvels in English texts of this widely read and frequently cited late fourteenth-century work. In each case, manmade *mirabilia* seem to become embodied only in complex relationships with their extant literary environments, particularly those influenced by the romance.

The romances consumed since the twelfth century were rife with *mirabilia*, from magical gems, exotic beasts, and castle walls armed with magnets, to chambers lit with rare minerals and fabulous eastern locales populated with magically animated men and creatures. The most exquisite of these devices were *automata*. *Le Roman d'Eneas* features a metal bowman; *le Roman d'Alexandre* depicts a mysterious castle guarded by animated golden warriors and an Eastern potentate's tomb guarded by copper men; earlier in the twelfth century, *Le Voyage de Charlemagne* depicted horn-blowing figures atop the emperor's palace at Constantinople, animated by the wind. In the thirteenth century, *Perceval le Gallois* and the prose *Lancelot* both feature mechanical guardians, and animated figures and flying horses populate thirteenth-century romances such as *Meliacín*.¹⁸ Poets

characterized these marvels differently from other natural wonders, denoting their artistic production as *ymagettes* or figures fashioned or cast by human creators, who were themselves described as philosophers, magicians, and necromancers. But by the late thirteenth century, technological innovations first encountered in the Muslim world had made significant inroads into Europe via Sicily and Spain, making widespread a new practice in the ontology of the courtly marvels and wonders of romance: *mirabilia* manufactured by craft. Manmade *mirabilia* thus became part of the complicated *engin* or human ingenuity whose ambivalent reception contributed to the development of the late medieval courtly subject.¹⁹

A brief note on the word *engin* may help to explain the emergence of romance *mirabilia* as magnificent adjuncts to court culture of the latter Middle Ages. *Engin* is a complex term presiding over a conceptual range encompassing intellectual ingenuity as well as the material products of that wit; its use in the romance is held to have emerged as part of the self-conscious redefinition of the chivalric self underlying the genre's development, and paralleling the development of investigation of natural cause in philosophy.²⁰ The ambivalent referent of the term coalesces in the craft production of marvels for courtly consumption, as these "nefarious luxury items" hovered among potentially idolatrous artifice, the investigation into divine *privitee*, and naked political desire.

It is in these early romances that the disciplinary potential of these devices first emerges, as literary portrayals of *automata* participated in the formation and regulation of courtly behavior itself. According to E. R. Truitt, "Their functions are surveillance and discipline, which signal not only the liminal status of the *automata* themselves, but also the ways in which they enforce boundaries of epistemological legitimacy and morality."²¹ Thus these marvelous *engins* denote a sort of self-fashioning, a calculated material expression of the chivalric self, and the production of manmade marvels is every bit as important as fashion and other sumptuary matters in the projection of courtly prerogatives. Such elite *mirabilia*, in their later craft manifestations, function as clever devices, affecting the objects, texts, and social interactions around them.²² We shall see how these marvels evolved to factor in Richard's reign, as he participated in the Europe-wide rivalry to dominate the political scene through magnificent presentation, or as John of Trevisa put it in his influential translation of Giles of Rome, "makynge and doynge grete things."²³

As early as the twelfth century, the material production of *mirabilia* was imagined on paper, but rarely realized. Thomas of Britain, cataloguing the marvels of the "hall of statues" in his *Tristan*, refers to the "carpenters and goldsmiths" building *automata*, and early engineers imagined harnessing natural forces to produce hydraulic clocks and even fancier *automata* such as those recorded in Villard d'Honnecourt's notebooks.²⁴ However, few

examples made it off the drawing board and into circulation during the twelfth and thirteenth centuries. These figures from Villard's *Notebooks* depict a contrivance for animating the figure of an angel, and a plan for making a crafted bird behave dynamically (see figures I.1 and I.2).

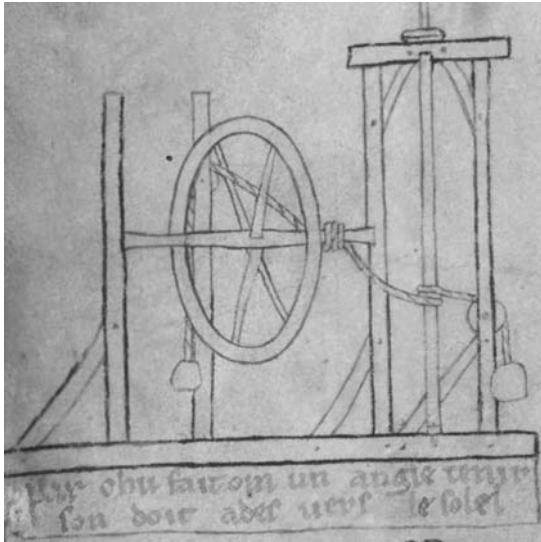


Figure I.1 Villard d'Honnecourt's angel-animating device (image courtesy of the Bibliothèque nationale de France)



Figure I.2 Villard d'Honnecourt's mechanical bird (image courtesy of the Bibliothèque nationale de France)

Early examples of mechanical *mirabilia* that were actually built are rare, and they did not work very well. One example is Parisian goldsmith Guillaume Boucher's fantastic metal tree, which was surmounted by an angel playing a horn, and spouted fermented mare's milk for the visiting Mughal Khan in 1250.²⁵ Only later, in the fourteenth century, do we see an explosion of manufactured examples of the wonders of romance circulating as objects.²⁶ Images such as Villard's mechanical rendering of a natural form presaged "a process of rapid development that was to produce in little over a century marvels such as the late fourteenth-century silver gilt and enamel table-fountain given to al-Hamid II by the Duke of Burgundy, as well as the elaborate *automata*" of Hesdin, owned by Robert of Artois.²⁷ However, the foundational period for the implementation of manmade marvels and wonders in court politics has been too long credited to the fifteenth century Burgundians.²⁸ It was the fourteenth century that saw them more frequently articulated as mechanical devices, and employed for the purpose of enhancing political capital or religious awe (see figure I.3).

This simple automaton, a cock from the roof of Strasbourg cathedral, is a rare survival from this early period in the manufacture of marvels. These intricate machines spread rapidly throughout Europe, and were especially prominent among courts such as those of Richard, Charles, and others sharing a mutual interest in the emergent doctrine of courtly magnificence then taking shape. Courtly *mirabilia* were implicated in the political culture of Europe almost from their inception as artifacts. For although men had for hundreds of years made unicorn's horns of Norwhals' teeth and dragon's claws of beryl and shell, the late fourteenth century presents a fascinating cultural tipping point when marvels manufactured by men—*manu* in the etymological sense of made by hand, rather than found in nature and re-signified—were explicitly used for political and ideological purposes, participating in the establishment of a courtly culture whose politics of display was enhanced by manmade marvels.

The greatest among these marvels were the elaborate clockworks and animated creatures or *automata*, mechanical imitations of life such as the gilt birds, robotic deer, and other marvelous machines built to perform at court. As material artifacts, they were made even more apparent through the self-referential literature of courtly life: the romance, where in the eleventh century these ideological *engins* first were given a textual life that would in later centuries inspire their transformation into the material *engins* of manufactured *mirabilia*. Spreading throughout Europe, their role as politicized courtly artifacts would be reinterpolated into the texts at the core of this study of the period's fantastic *engins*, as Chaucer, Gower, and



Figure 1.3 Mechanical Cock, Musées des Arts Décoratifs de Strasbourg (photo M. Bertola)

others employed them in ways critically associated with the contemporary political scene.

As much for lack of space as for contrast, I focus on *mechanicalia* as a way of setting manmade marvels apart from the period's well-documented tide

of marvelous *naturalia* such as gilded ostrich eggs or narwhal teeth passed off as unicorn horns. Manmade marvels operate at the limit, straddling the line between object and agent as they participated actively in city and court life. Their role in the court of Richard II is detailed in chapter 1, as we begin to develop a sense of the affinity for manmade marvels emerging among the opulent courts of the late medieval transalpine west. First, however, it seems appropriate to sketch a brief genealogy of manmade *mirabilia*.

Classical Ideas and Medieval Practices

From the earliest representations of classical wonders to the feats of marvelous engineering deployed in the Burgundian courts of the fifteenth century, manmade *mirabilia* have both fascinated and repelled their various audiences. They had a rich basis for reception in the revival of classical tales of moving images, and in later Christian strictures against *idolatria*, which eventually made their way into medieval retellings of classical stories involving *automata*. The history of these mechanical marvels begins in the classical world.

Early Mediterranean literature is indeed rife with stories of relationships between people and images, such as the story of Brutus Philippi, Caesar's famous assassin, who so loved a statue of a young boy created by Strongylion that he bestowed upon it his patronymic, essentially adopting the artwork as family. Even more intimate was the relationship between Cleisophus of Symbria and the statue he adored, whose frigidity he overcame through the imposition of a piece of meat between himself and the cold surface of his beloved.²⁹ The distinctly mechanical wonders of Greek and Roman legend also include the sculpture animated by Venus in *Metamorphosis* 10, Homer's description of Hephaestus's animated metal hounds in book 7 of the *Odyssey*, and Aristotle in *Poetics* 9 cites the vengeance wrought by the statue of Mytis upon his killer. In the earliest example of *automata* in western literature, Thetis visits Hephaestus and views the handmaids of gold in the twenty-third chapter of the *Iliad*. The bronze giant Talus appears in *Appolonius of Rhodes* in the *Argonautica* 4 (ii.1636ff.) as the last survivor of the Age of Brass, reminiscent of Lucian's *Chronica*, in which the men of the age of gold were interpreted as literally having been made of gold, not unlike Hesiod, *Works and Days* ll.143ff. *Automata* also are mentioned in Pindar, *Olympia* 8, l.194ff., and manufactured men are present in Juvenal's *Satires*, 6.12, and in Virgil's *Aenid* 8, l.314. In the Middle Ages, Virgil was thought to have got in on the act directly; thus the *Gesta Romanorum* LVII relates of his production of animated bronze men.³⁰

Perhaps most well known is the story of *Pygmalion*, propagated throughout later medieval culture in tandem with the arrival of the clockwork *automata* making their way back from the Arab world in the twelfth and thirteenth centuries, and featured in so many contemporary romances. In this story, which made its way into European culture through Ovid's *Metamorphosis* (10.243–97) and was perhaps best known in the later Middle Ages in the version in the *Romance of the Rose* (20787–21184), we naturally—or unnaturally—find Pygmalion in love with his creation. The innovation in Jean de Meung's version is that the creator is a fine artist, whose skills are enumerated and whose technical proficiency is marshaled specifically to animate the statue.

It is in this idea of Pygmalion that we can begin to see the ambivalent stakes for manmade marvels in the later Middle Ages, as the clockworks animating these machines invite moral prohibitions against idolatry.³¹ Such representations conflate images of bodies and machines with anxieties about sin, but given their circulation in courtly poetry, they also emphasize associations between manmade *mirabilia* and *techné*. We will see that the conflation of machines and bodies appearing in many texts suggests a widespread anxiety about the effects of technology, whether of the tyranny of the clock or the idolatrous reproduction of animate bodies, that plays out in representations of the period's newly desacralized *mirabilia*, often with localized political import that is only revealed as the manmade marvels are excavated from the sediments of an incomplete historiography of their roles as marvelous courtly ephemera.

The ambiguity associated with mechanical marvels extends from broader philosophical discourses on the taxonomy of marvels and the nature of technology. The dominant Augustinian Christian progressivism that saw technology as a prosthesis to supplement the fallen body of mankind was offset by the persistent notion that mankind's technological successes would come at a price. Tertullian's *On the Soul* suggests, for example, that the control of nature by man is potentially detrimental to the earth.³² The relationship between salvation history and the use of technology by fallen mankind is a fraught matter, for to Augustine, "[w]ith the coming of Christ, the moral history of mankind becomes relentlessly progressive, while material history remains only haltingly so. The realization of worldly desires may be accomplished—through labor, invention, statecraft, and other means—but only as a by-product of a moral development that remains dependent on God."³³ Augustine's implied limit on technology is in the spiritual orientation toward salvation, characterized in terms of humanity's simultaneous spiritual rise and physical decline through six world ages.³⁴ As the world declined into the future, the enfeebled body of postlapsarian mankind could improve

through artifice, as detailed in *De civitate Dei*.³⁵ The creation of tools had been licensed since the time of Augustine, long before medieval technology could produce the *simulacra* of the thirteenth and fourteenth centuries. This positive Augustinian notion of man as artificer persisted throughout the Middle Ages, and contributed to the variety of ways in which medieval European culture's enthusiasm for technology promoted the dominant ideologies of the west in the face of superior cultural organization and more refined technology.

This general approbation of technology, and by extension of the technological marvels mankind could render, was always in danger of being interrupted by the overzealous pursuit of worldly desire, for example, in the production of deceptive marvels in magical or alchemical practice, or in King Alexander's pursuit of marvels for their own sake. "Progress, which is the material form of Augustinian Providence, has given man both the prosthesis of technology and a bountiful nature subject to the human will. Even in his fallen condition, man can savor some of the lost pleasures of paradise through the exercise of his sovereignty over nature, but only in the context of spiritual anticipation."³⁶ To employ technology for sinful or unspiritual purposes motivated by *curiositas* relegated the artificer to the City of Man.³⁷ But this was not always so.

Recourse to scholastic ideas about *mirabilia* and technology may offer insight into this pattern of representation and the underlying anxieties behind it. In this period marvels were being examined directly by scholastics such as Nicole Oresme and William of Auvergne before him, as *mirabilia* in natural philosophy underwent a radical shift through examinations of wonder at natural phenomena. The attitudes that underlie the skeptical perspectives of later philosophers have their roots in the early twelfth century, when, despite a lack of familiarity with the texts of Aristotle, a "jaundiced attitude toward wonder in Latin natural philosophy persisted."³⁸ The rationalizing tendencies of the period were developing toward the belief that, excepting the very rare circumstance of direct divine intervention, marvels were man's to define or create, and all that appeared marvelous or supernatural was either created by nature, mankind, or somatic disturbances.³⁹

By the thirteenth century, the idea of *mirabilia* had taken on negative valences that called into question the earlier enthusiasm around marvels. At the same time, technological advances were reshaping much of European society, as mechanisms such as the clock cast "a new aura around existence, which was governed now not by rhythms natural to human life but by a mechanical time."⁴⁰ This "mechanism minded world" required categories for coming to terms with its ability to replicate the marvels of God's

creation, and perpetuated the vocabulary and ideas of earlier thinkers even as it reconfigured these notions for use in daily living among this new class of mechanical wonders.

Daston and Park characterize Thomas Aquinas's rationalizing approach to the moral pitfalls of distinguishing the causes behind *mirabilia*, pointing out that like Albertus Magnus and other contemporaries, Thomas made the semantic argument that virtuous *studiositas*, devotion to knowledge, was distinct from futile *curiositas*.⁴¹ The clockwork world of the later Middle Ages, far from a modernist technological utopia, was fraught with moral danger.

Adelard of Bath, Roger Bacon, and Albertus Magnus each adhered to notions of cause in their investigations of nature, and disdained wonder along with their contemporaries. Adelard's *Questiones naturales* attacks the Augustinian approval of wonder by suggesting that ignorance of cause is the origin of wonder. There is an amusing measure of the relationship between philosophical considerations of *mirabilia* and the social reception of these ideas in the fact that Bacon and Albertus were intimately bound up in stories of the production of technological marvels, for they were associated in the popular traditions with mechanical *automata* of their own. Albertus was said to have created a moving, talking woman later destroyed by his acolyte Thomas Aquinas. Bacon is also credited with the creation of a brazen head made to speak prophecy, and has long been associated with a variety of mechanical devices, including mechanical sea vessels that "move with greater swiftness than if they were full of oarsmen," cars whose "motion will be without help of any living creature," and crank-driven "artificial wings to beat the air after the manner of a bird's flight."⁴² His "machines, and unheard-of engines" were distinct from magic, clearly understood as the technological artifice of men. Their technical marvels, however, were validated as spiritual pursuits, differentiated from the moral dangers of simple *curiositas* through classification as forms of rational inquiry. As we shall see, such designations are far more murky in practice than in theory. Although we will deal with the theoretical underpinnings of manmade *mirabilia* where necessary, this book is far more concerned with marvels in practice.

Words for Things

Despite the considerable number of philosophical and theological taxonomies encompassing *mirabilia* that emerged during the twelfth and thirteenth centuries, it can be difficult to put labels on the phenomenon of manmade

marvels, which in practice had no centralized discourse. And in general, despite their romance-inflected participation in magnificent court performances, marvels remained inherently unstable etymologically as well as phenomenologically, resisting the violence of highly structured systems of verbal classification. This offers little solace to the philologist or critic intent on isolating a fixed meaning for the vocabulary around a specific marvel, but the terms “marvel” and “wonder” as distinct from “miracle” have become critical commonplaces for maintaining the distinction between *mirabilia* and *miracula*. These terms began to be established in the thirteenth century and have been employed by scholars to the present, but the ideas and vocabulary that shaped the western concept of *mirabilia* go back to the Fathers.⁴³ It seems germane to briefly tour how words for portents or signs came, eventually, to represent their material referents and the experience of engaging those referents.

From the time of Augustine until the thirteenth century, the medieval idea of marvels had remained stable, guaranteed by the belief that the divine hand was the direct cause of wondrous events and phenomena in the natural world. The medieval Latin terms *mirabilia* and *miracula*, both rooted in the Indo-European word for *smile*, were used interchangeably, functioning as expressions for the same referent: heavenly intervention in the natural order.⁴⁴ *Mirabilia* and *miracula* encompassed a range of wonder-inspiring phenomena: for early medieval thinkers, the monstrous hybrid griffin, the eternally burning but unconsumed salamander, and mankind’s magical manipulation of nature were all *mirabilia* worthy of *admiratio*, wonder at the apparent deviation from natural order. These marvels were cited as evidence of divine intervention in the sublunary world, and the positive character associated with such wonders remained in force for much of the medieval period.

The dominant perspective on marvels for most of the Middle Ages can be found in St. Augustine of Hippo’s *De civitate Dei*.⁴⁵ Augustine’s position, contextualized by his efforts to describe the persistence of bodies burning eternally in hell, characterizes the doctrinal approach to understanding marvels that governed the European outlook for centuries:

From [God’s power to create deviations from natural kind] comes the wild profusion of those marvels which are called omens, signs, portents, prodigies. . . The various names *monstra*, *ostenta*, *portenta*, *prodigia* come from the verbs *monstrare* “show,” because they show something by a sign, *ostendere* “display,” *portendere* “spread in front,” that is, display beforehand, and *porro dicere* “say aforetime,” that is, predict the future.⁴⁶

Augustine’s etymology implies the divine desire to signify His will directly to mankind. His argument insists upon divine revelation of meaning as the

basis for both perception and understanding of marvels: *mirabilia* for him are aligned with monsters, ephemeral signs revealed or shown to reinforce eternal spiritual truths. Here he establishes the primary early medieval approach to the discussion of *mirabilia* and denotes the context of meaning for marvels. Augustine and his followers, who saw in marvels a positive display of divine will, enthusiastically affirmed the ability of the divine to deliberately reshape nature (*mutare naturas*). The fleeting materiality of the portent itself, while interesting as a marvelous departure from the norm, was subordinated to both the meaning of the revelation and the larger issue of benevolent divine will over creation.

This elementary terminology established in the early Middle Ages persisted despite an array of doctrinal, social, and technological shifts in the twelfth and thirteenth centuries, which began to alter the referent: even though the vocabulary endured, the marvel itself began to change in the later medieval period as the concept became divorced from divinity.⁴⁷ Scholastic philosophy under Bacon and other proto-scientific thinkers became increasingly concerned with causal chains within the natural world, freeing marvels from divine causation as nature became the intercessor in the performance of marvels, and the trend eventually began to veer toward mankind's agency as technology allowed for the creation of earthly marvels.

Gervase of Tilbury's *Otia imperialia* (ca. 1325) distinguishes between *miracula*, which imply divine cause or a suspension of the natural order, and *mirabilia*, which motivate awe in observers by obscuring their natural causes. Both produce in their viewers the emotion *admiratio*. Throughout the later medieval period, the official discourse of natural philosophy, which sought causal explanations for phenomena as diverse as the constitution of spider webs, the properties of gems, and the fireproof salamander, employed this basic vocabulary of marvel, wonder, and miracle. The differentiation between divine and natural causal origins is expressed clearly in Gervase.⁴⁸

But whereas *miracula* maintained, in Chaucer's words, "Goddess privitee," the more worldly or *natural* notion of *mirabilia* could complement the traditional idea of wondering—*admiratio*—with a degree of *curiositas*, the desire to understand the cause behind the marvel; this adulterated emotional response Augustine termed *concupiscentia oculorum*, or lust of the eyes, and other philosophers undertook to expand upon the ambiguities of wonder as its qualities were debated in the later Middle Ages.⁴⁹

As the fourteenth century progressed, emerging reconfigurations of the politics of craft merged with elite social tastes for romance literature and sumptuous display to license the production of marvels for entertainment, radically changing their traditional signification for later medieval culture.⁵⁰ As I have indicated, a major contributor to this profound shift in the idea

of the marvel was created when textual *mirabilia* in the late thirteenth and early fourteenth centuries became manmade objects through new technologies such as mechanical clockworks. These manmade marvels of the later Middle Ages were described as “curiously ywrought,” “slye,” “craftie,” or as clever “engyns,” conveying the notion of their materiality and of having been built to deceive.

From these marvelous manmade particulars we can establish a more coherent framework for what manmade *mirabilia* were in the later Middle Ages: how they were experienced as material phenomena rather than how they were categorized as classes of moral, spiritual signifiers. Writing on the manmade marvels of the Middle Ages therefore requires some deliberate play on the traditional definitions of *mirabilia* and *admiratio*, for these terms emerge from a complex discussion in the early sciences and theology, areas of reference with only indirect application first to the literary representation of manmade marvels, and later in the deliberate embodiment of marvels and the production of wonder as a token of the exchange of social capital amid the political struggles of later European court affairs. Throughout I have chosen a pragmatic use of the terms “manmade-marvels” and “*mirabilia*” to denote quite a broad class of objects, but with a common element.

Although manmade marvels cross categories and hybridize social practices, they all share one vital characteristic: they are objects or representations of objects, things in the world acting upon others. They are clever devices, idealities inscribed in literature and transformed by craft into objects: material engines for redistributing balances of power, realigning human actors, and transforming the mundane for sociopolitical effect. No longer would marvels circulate among a tiny, literate elite composed of philosophers and the readers of romance. Wonder as a social practice changed as men began to manufacture it deliberately, not least because the number of perspectives involved in its production penetrated deep into the lower end of the social spectrum.

The Marvels and the Critics

Modern perceptions—have we ever been modern?—of what constituted medieval *mirabilia* are clouded by compartmentalizing narratives accreted over centuries of ideological reconfigurations of the medieval. Manmade marvels are still emerging from the veil of the Burkhardtian legacy, in which the complexities of medieval culture and its marvels are eclipsed by the image of a monolithic premodernity dreaming under a “veil woven of faith, illusion, and childish presupposition through which the world and history were seen clad in strange hues.”⁵¹ Surpassing this myth

of homogeneity requires a flexible web of heterogeneous cultural reference, situating manmade marvels in the greater scope of medieval life, literature, and social practice.

This book implicitly, and often explicitly, works to encompass the experience of courtiers, middlemen, court *tregetours*, and lowly mechanics as they experienced manmade marvels, and no amount of Burkhardtian generalizing about superstition can account for the variety of perspectives these particular examples might generate. The manmade marvel opens productive avenues for reflecting upon the fantasy of instrumentality that those who would apply restrictive categories to *mirabilia* often maintain in human relations with things. Their disquieting presence is, in short, a key element drawing together discourses sundered by modernity: the collection, the politics of magnificent display, the culture of chivalry, the human response to technology, the meaning of magic, and the experience of craft. The manufactured marvel gestures simultaneously among multiple discourses, enacting on the one hand the significations required by elite patrons, while inherently foregrounding the human production of the marvel, and its variable agency to affect its surroundings. As it is cut loose among the fields of cultural production, it transforms from object to thing, from inert matter upon which humans exercise their instrumentality to quasi-object, a thing that operates as an orchestrator of subjectivities. The marvel in performance loses the fixed identity of representational art, becoming different things simultaneously.

Explorations of slippery concepts such as manmade *mirabilia* must strike a balance between the expanses of the imagination and the confines of prescriptive structural definitions. Reading late medieval culture through its marvels complicates the matter by implicating the myriad genealogies of wonders and monsters projected back on the fourteenth century by post-Enlightenment Europe. Awareness of the dangers of traditional periodization, the potentially misleading character of large-scale categorization, and the limitations of historiography does not, however, relieve the critical burden of presenting marvels within historically sensitized frames. Rather, a self-reflexive historiography requires attention to the differential movements of any number of cultural factors affecting the object of study—in this case, the integrated subject of manmade *mirabilia*.⁵²

Eugen Weber has argued that individual narrative motifs can reveal historical fact, and more recently Joel T. Rosenthal suggests that political realities persist in medieval texts in the guise of images so traditional as to be accounted folkloric; such studies implicitly argue for highly contextualized readings of seemingly conventional narrative motifs.⁵³ Therefore, care must be exercised in using traditional critical instruments such as motif indexes or other categorizations of intellectual history for classifying

marvels, monsters, and other literary motifs. Indexes and other collations relying on trans-temporal or cross-cultural systems of classification may misdirect scholars by shaping the nature of their inquiries through the critical categories employed by the compiler, rather than moving from the cultural setting of the object and the praxis within which it finds its significance and use.

An excellent example of an early and useful critical work on *mirabilia* that nevertheless fails to acknowledge difference in the analysis of a marvelous motif is Clouston's addition to Fredrick J. Furnivall's *John Lane's Continuation of Chaucer's "Squire's Tale,"* which has become the basis for assuming a relationship between the brazen horse of Chaucer's *Squire's Tale* and a series of magical horses going back centuries.⁵⁴ Such scholarship, and its tools, reveal much about the travel of texts and the interrelation of cultures, but by grouping like motifs such as marvels into categories such as "flying horse" or "mechanical peacock" they risk eliding difference in favor of convenient but potentially misleading taxonomies. The tools enabling this method helpfully trace the genealogy of motifs and tales through universalizing forms of association, but therefore present misleading universal ideas in lieu of particular analysis. But by reading motifs such as the diverse field of medieval *mirabilia* within tightly constructed cultural contexts, it is possible to avoid the classificatory misdirection implied by the universalizing structure of traditional source references, forcing a reassessment of received opinions based on these methodologies.

Despite the practicality of the term, employing *mirabilia* as a catchword for all manner of marvels is symptomatic of the tendency of modern critics working on medieval marvels to analyze from the general to the specific, employing broad definitions in an attempt to encapsulate the full meaning of a particular marvel. This practice of reading specific marvels through contexts provided by general categories persists even in critiques of medieval attempts at categorization.⁵⁵ In this, modern critics sometimes come near recreating the inability of medieval philosophers to offer explanations for particular marvels, for the qualities of any particular marvel "could be determined only by experience, which was not part of the philosopher's brief."⁵⁶

Thus my preference for reading specific marvels for the range of social qualities they comprise, rather than obscuring their expressive range by forcing them into isolating categories. Since this entire project contends with the difficulty of establishing the parameters of particular marvels as phenomena, I will continue this *entrée* to the problematic *mirabilia* of the fourteenth century with an example of the critical difficulty of defining marvels through intellectual classes or categories.

An instructive case involves one of the most comprehensive and yet vexed structural definitions of *mirabilia*, offered by Jacques LeGoff in the

introductory chapter of his seminal study, *The Medieval Imagination*.⁵⁷ LeGoff defines the marvelous as the “natural form of the supernatural,” the cultural confluence of theology, philosophy, the arts, and sensibility. He attempts to crystallize his idea of the marvelous by placing marvels between two more clearly definable phenomena: the divine supernatural and the demonic supernatural. Against this stable, polarized background distinguished by divine and demonic causation, he serially redefines *mirabilia* according to function, origin, and “vehicle” or shape using a welter of methodological and classificatory systems. Despite his strenuous efforts, none of these categorizations ultimately offers a comprehensive account of the boundaries of the marvelous. By turns historicizing, etymologizing, and reclassifying marvels, the increasingly unwieldy and open-ended form of his discussion is itself instructive: for while we may attempt to prescribe boundaries for *mirabilia*, marvels as *genera* always seem to exceed our ability to define them except in broadly relative terms. The general-to-particular form that LeGoff employs denies him the unity of approach he seeks, and instead of closure, he creates for himself a multiheaded hydra, a monster propagating definitions out of control.

LeGoff’s attempt to define marvels is problematic from a methodological point of view, but his perception of a change in the social position of marvels in the thirteenth and fourteenth centuries is enlightening. He discerns a shift that escapes formal denotation, and withdraws to the loose conclusion that “the marvelous seems to me to gain ground on the miraculous and the [demonic]” in the fourteenth century. This observation, clearly borne not of reading for experience, but by category and persistent vocabulary, leads him to ask, “Does it make sense to think of a ‘secularization’ of the supernatural?”⁵⁸ His idea of “secularization” implies a shift to the unregulated popular provinces only marginally influenced by the doctrines of the scholastics. Here LeGoff inadvertently hints at the emerging popular legacy of manmade mechanical marvels without realizing their relationship with the simultaneous textual shift in scholastic and literary considerations of *mirabilia*. It is specifically what he calls secularization through which I believe we can more closely define what marvels were and what functions they carried out in late medieval culture, using the social traces of this new form of *mirabilia* to gauge changes in popular perception.⁵⁹

LeGoff suggests that by the late Middle Ages, marvels had been reduced to textual ornament in romance genre tales: he refers to this as the “aestheticization of the marvelous,” implying a decline in the psychological response called wonder.⁶⁰ But recourse to the broader function of marvels outside the narrow boundaries of genre suggests that rather than simply declining, traditional romance-inspired marvels during this period acquired

a whole new life independent of the supernatural causation upon which they had formerly relied. As *mirabilia* were realized through human craft-work, they were liberated from and in turn acted upon the courtly texts and environments that inspired their creation, adding complex layers to the more stable early medieval notion of divinely motivated marvels. Thus my contention that wonder in this period was undergoing radical shifts implicating the very phenomenalization of *mirabilia* LeGoff overlooks due to an overreliance on traditional forms of classification and an aversion to exploring the meaning of romance marvels and wonders.

Even Carolyn Walker Bynum's excellent study of the idea of wonder excludes from consideration this significant cultural node of manmade *mirabilia* in the period. She acknowledges the marvels of romance only obliquely for the importance of artifice in crafting and staging marvels, but after a long peregrination through multiple categorizations of marvels and wonders, comes at last to a conclusion pointing directly at the materiality of even the textually rendered *mirabilia* producing the wonder at the heart of her study:

[Medievals] can marvel only at something that is, at least in some sense, there. Marveling responds to the there-ness of the event, to its concreteness and specificity.⁶¹

And indeed they were there, as things, events, concatenations, and part of my effort in this book is merely to demonstrate the thereness of the objects. We will find, for example, that the magical items of Chaucer's *Squire's* and *Franklin's* tales were modeled not only on texts but on performances of manmade *mirabilia*, objects whose effects were significant enough to divert the normal course of literary transmission.

Chenu points to the value of "discriminating among the various strands" born of the scholastic effort to alter the meaning of *mirabilia*.⁶² As we position ourselves among these strands, spanning texts, technologies, doctrine, and the self as physical body and as a social construction, we witness in the "thereness" of late medieval marvels not a reduction of wonder, but a wonder modified with an increasing *curiositas* regarding secular marvels, vying with increasing anxiety about the relevance to the body and soul of such worldly pursuits. Tracing particular manmade marvels through a variety of fields reveals the complex social position of manmade marvels in the fourteenth century. It is the "thereness" or physical manifestation, the "thingness" of the marvel that is shared by all conceptual approaches to medieval *mirabilia*. And so we arrive back at the poles of marvelous experience in the Middle Ages: the marvels of romance literature and culture, together with the artifice that brought them into being as

objects at court and in civic contexts, provides most of what was wondered at in the period: manmade marvels, the craft *mirabilia* that constituted, for most medievals, the sum of their secular experience of wonder.

Marvelous Things

But what are these things, and what makes them worthy or *admiratio*? Neither entirely material nor entirely semiotic, these marvels could originate in texts, become objects rendered through a variety of arts and crafts, and experienced as part of social existence across a range of associational forms, and then make their way back into texts. The quasi-object, as outlined by Bruno Latour, is a good descriptive analogy for the kinds of marvels this study seeks to engage. Latour's quasi-object is real, natural in the sense of being a product of material processes, a thing in itself; but it is also discursive, signifying in the sense of carrying meaning, and thus the identification of its referents is dependent upon local knowledge. The quasi-object is therefore social, collaborative, a full participant in specific semiotic collectivities.⁶³

Noted for the ability to make things happen, to restructure relationships among people and objects, *mirabilia* ultimately aim at the purchase of prestige: the manmade marvel is a tool for acquiring status in a European culture driven by the value of the projection of magnificence. But as is evident in the case of Borra with which I began, just as often, the tax on this purchase of magnificent display is the potential for a complete reorganization of the nature of the bargain: throughout this book I contend that the production of manmade *mirabilia* constantly forces a reconceptualization of what the object at the heart of this production is, how the *particular* thing is to be parsed, divided among competing prerogatives and ideological stances that ultimately owe their social organization, the object of their desire, to the very thing whose instrumental control they took for granted. Thus throughout this book I move across, among, and around the fields into which we have organized medieval marvels, navigating a medieval experiential landscape in which marvels were not yet parsed into separate intellectual categories and fields.

Bill Brown's "Things," the quasi-objects of Serres and Latour, Donna Haraway's material-semiotic actors, and the entities inhabiting the networks envisioned in Grossberg's spatial-materialist ontology all speak to the difficulties we have seen in extending broad categories over particular examples of *mirabilia*.⁶⁴ Brown characterizes things, the objects that surround us, as denoting the "concrete yet ambiguous in the everyday."⁶⁵ This formulation, in which ambiguity coalesces around the other side of the object—the object partially obscured—begins to suggest the experience

of marvelous things in medieval culture. He elaborates on the nature of things as “what is excessive in objects, as what exceeds their mere materialization as objects or their mere utilization as objects. . .the magic by which objects become values, fetishes, idols, and totems. . .thingness amounts to a latency (the not yet formed or the not yet formable) and to an excess (what remains physically or metaphysically irreducible to objects).”⁶⁶ In this way, Brown’s conception echoes Michael Camille’s description of animated artworks in medieval culture as representing the potentiality of things. As things, manmade marvels vacillate between objectified instrumentality and ambiguous, autonomous potentiality.

The qualitative forms of wonder inspired by manmade marvels derived value from the social elevation they provided their patrons. But the makers of these devices—from magi such as Bacon, to Villard who conceptualized them, the nameless craftsmen who measured and cut the stuff of which they were made, to the poets who rendered them back into texts—necessarily derived from different social effects. The devices were actors in their relationships with makers and audiences as well. They coalesced from an assemblage of narratives or networked patterns of knowing, and were capable of reconfiguring social relations outside the contingencies imagined by their users: channeling desire, redistributing power, destabilizing expectations. The human instrumentality implied in the making of “manmade marvels” is ironically destabilized by their very embodiment: no longer idealities, they were capable of failure, slippage, misperception, or shocking success. No wonder that for medieval thinkers, the creation of artificial bodies was fraught with perils, including *idolatria*.⁶⁷

The animation characteristic of the most elite forms of manmade marvels such as human and animal *automata* further sets them apart, makes them more than mere objects, or in the words of Lesley Stern, “invests the delineation of things with a particular affectivity.”⁶⁸ To Michael Camille, the animated marvel “breaks the bounds of representation and enters into life itself,” and infuses other representational art with a certain immanence, for “[i]n a world where rare and artificially constructed images moved and seemed to speak, any static representation held possibilities that for [moderns], with our aesthetic and historical distance, seem unimaginable.”⁶⁹ The experience presented by medieval *automata* and other marvelous imagery can be described as this immanence of experiential relation; the statue—understood as a static object—literally steps from the realm of frozen symbolism and into the lived experience of viewers, whose psychological distance from the static artwork is stripped away as their seemingly fixed perspective is transformed instantly into a participatory role, as they are spilled, willing or not, into a relationship with the marvelous object.

Manmade *mirabilia* reorganize the relationship of person to thing. If these marvelous medieval performative devices created changes in perspective through immanence and wonder, then in a sense this book seeks a change in our modern perspective by moving these marvels again, by reanimating them in their cultural roles as provocateurs, agents, modifiers of social relations. In a sense this gesture is an extension of my own first wondering encounter with *automata* in the Smithsonian: an innocent and ingenuous attempt to make them *go* once again, a desire for an immanence lost. This book is therefore a recovery, a theorization of medieval relationships with *mirabilia* that accounts for the anthropology of craft production and machinic autonomy in an era of craft secrecy and limited documentary evidence.⁷⁰ These objects move from the pages of elite texts that inspired their patrons into the hands of the craftsmen who produced and stage-managed them, and eventually become reinscribed as later writers responded not only to the initial literary analogue that inspired the manmade marvel but to the experiential impact of that manmade marvel.

Recovering Wonder

The encounters with *mirabilia* in this book are grounded in the wonderful work on intellectual traditions in the works of Park, Bynum, and others, but find, in highly localized readings of marvels in the popular texts of Chaucer, Langland, Gower, and others, a responsive understanding of *mirabilia* grounded in the local culture of these clever devices. Without acknowledging the place of this culture, the objects themselves become black boxes of elite ideology, successful because we have forgotten the effects they wrought in their culture, let their bodies slip into invisibility even as we admire the results of their success: the generation of social prestige sought by those who commissioned them. The body of the mimetic marvel that lies in this black box is the real subject of my work on the effects of the production of manmade *mirabilia* in a craft culture that has so far been silent in the history of *mirabilia*.

Of course this book is not an effort to restore an understanding of these devices by centralizing them as objects of analysis. Rather, I wish to acknowledge that despite all of the narratives we maintain to organize our experience of the past, the actual objects that constituted that history had their own part in arranging time, place, meaning, and the rest of the participatory networks that our modern narratives have concealed, compartmentalized, and obscured. I have imposed some organization through a focus on late fourteenth-century English authors, but range among discourses in pursuit of the marvels as objects in a theater of exchange that, in many cases, stands prior to the inscription that freezes a

manmade marvel in a particular social and intellectual category, such as the museum or the romance. More broadly, the book shows how a sophisticated understanding of *mirabilia* features in and thus illuminates for us the instructional genres of romance, didactic literature, and technical treatises, arguing that the intellectual categories that inform much of what we know of these now-lost marvels have hampered an understanding of the sociopolitical roles that the objects themselves could take on.

Therefore, I use a necessarily imperfect lens, providing a view of the culture of manmade marvels that follows the idiosyncratic paths of objects and actors, rather than the rigid boundaries of intellectual category and literary genre. In a sense I'm trying to resist the object-position these devices occupy in literary history, confirming in the most intimate ways the intermeshing of the body and the machine in medieval culture. Through the embodied wonders of marvelous *automata* and the internalization of its cousin the clock, the romance body exposes its interiority to convey the regulating mechanisms of chivalric *temperantia*, only to divulge in the process its *engin*, the whirling gears of potential sin revealed in the expression of elite identity through the machine. It is my hope to reinvigorate a conversation about the work wonders did in peoples' lives, and that my readers will join the medieval subjects in this book in finding manmade *mirabilia* as fascinating as the marvels of nature these devices simulated, and in so many cases surpassed, with wonder.

CHAPTER 1

BY ANGEL'S HAND: "PIERS PLOWMAN" AND LONDON'S CROWNING GESTURE

*þerfore þe vertue magnificencia hath þe name of workes and of facio, makynge.
Magnificus is cleped as it were magna faciens, makynge and doynge grete thinges.*

—*De Regimine Principum*, I.ii¹

Ideological “engins” and Ricardian Court Style

The manmade *mirabilia* of the late Middle Ages have deep conceptual roots but also a complicated genealogy in practice, commanding a central role in courtly image-projection, technical showmanship, and experiential communication. These marvels were the ideological tools of a privileged elite, but enabled by a crafts-class whose perspective on their creations has been lost among the threads of discourse that bring the lost *mechanicalia* of the period down to us.

The coronation pageant of Richard II forms an ideal tableau in which manmade marvels played roles beyond those prescribed by—and later inscribed for—their elite patrons. Richard's first great pageant was a powerful representation of English kingship in dialogue with other European elites, but also with the low public before—and behind—this magnificent spectacle. The mechanical angel that handed a crown to Prince Richard was an embodied node of intersection contrived among the interpenetrating and sometimes discordant prerogatives of competing classes, whose reading of the marvelous event may have differed considerably. I therefore begin with a sketch of the event, and then fill in the background of such public displays of *mirabilia* by noting the royal collections and interactions between patrons, artists, and craftsmen underlying England's first broadly public performances of manmade *mirabilia*, before looking at how the

meeting between an angel and a king in the prologue of *Piers Plowman* might enlarge our sense of the event as conveyed in the chronicles.

On July 15, 1377, London awoke to the knowledge that the very next day, eleven-year-old Prince Richard would enter Westminster Cathedral to be anointed with the holy oil and crowned, emerging not as a boy prince, but as their king. By midmorning, the residents of Chepe thronged about the Great Conduit, a castellated structure squatting in the middle of Chepe. There, before the shops and tenements on the south side of the street, and within steps of the Church of St. Thomas of Acre to the north, lay the Conduit. Normally ringed about with taps for the provision of water to the neighborhood, on this day the crowd witnessed the marvel of flowing red and white wine, gushing into tubs where anyone who desired to could dip a cup, decidedly enhancing the celebratory mood.

On any other day, the neighborhood would have echoed with the sounds of commerce around the Mercery, the great market whose density near Bordhaw Lane could choke cart traffic, and whose participants—hawkers with market carts, tenant tradesmen from the metalworking crafts, minor merchants in flimsy stalls, and a variety of sellers with street-stands or arms filled with goods—trailed down Chepe in front of the numerous storefronts, workshops, and tenements lining the street. On this morning, however, sounds of revelry replaced the intrusive clatter of construction that had in the preceding days echoed among the orioles and rooftops of the neighborhood. In all likelihood no one had much minded the noise, for the carpenters were building a pageant tower upon the conduit, in anticipation of a visit from the nobility. The tower, decorated with banners, pennants, and silver-burnished hides, stretched high, competing with the rooflines of the nearby buildings. The powerful guild of London Goldsmiths had erected this pageant to honor the prince, whose courtly riding was to stop here on an itinerary from the Tower at the eastern edge of London to the next day's coronation at Westminster.

By late morning, the streets, already raucous with revelry and crowded despite the removal of the ubiquitous carts and other impediments to street traffic, would have taken on a new sound as a large contingent of mounted nobles pushed through the throngs of revelers. Looking east down the street, the people of Chepe heard the blare of trumpets announcing the royal contingent, as gold-leaf florins began sifting down on the morning air, cast on the breeze by four angelic maidens, all in white, leaning out of the pageant tower. At the head of the approaching cluster of horsemen was old Gaunt himself, uncharacteristically gentle as he worked his palfrey among the crowds abreast of Simon Burley, who held a sword aloft before the prince, who followed Gaunt.

Dressed all in white, the young boy moved amid the noble host past the Church of St. Thomas of Acre and toward the pageant tower itself, its four corners flung high, surmounted by a cupola housing the golden statue of an angel holding a crown. As the local craftsmen and merchants watched from the packed streetsides, the prince dismounted and moved to the base of the tower, casting his eyes aloft at this angel.

Suddenly, fantastically, the angel's golden body began to move, bending down from on high to proffer its golden crown to the slender youth standing before it. The angel was so cleverly wrought that it appeared to move on its own; none could imagine how it had been constructed, and yet there it was, descending from the tower to hand the crown to the next day's king, as maidens rained down golden largesse from the tower above. Banners, pennants, and steamers transformed the neighborhood into a New Jerusalem, an earthly paradise where free wine and flashing gold transformed the well-swept expanse of old Chepe for a moment, until the prince once again mounted his horse and the noble procession continued around the gentle curve of shop-fronts and out of sight. The prince's retinue was bound for outlying Westminster and, for residents of this neighborhood, the veiled precincts of Westminster Abbey. This is in all essential details what occurred in London's Chepeside on the morning before Richard's official coronation, no doubt as part of Gaunt's early efforts under Richard to "reinvigorate an English regal prestige that had been severely compromised by Edward III's decline."² It was to be a foundational moment for a reign deeply invested in the power of magnificent display.



Although magnificent displays reflected their glory upon the nobility, it was craftsmen, not the aristocracy, who performed the kinds of works and making (*facio*) required for elite patrons to present magnificent marvels in the courts and streets of European capitals. From Rome to London, the projection of an appropriate social and ideological stance was of paramount importance to trans-European nobility, and the manner in which the nobility chose to confirm their status was through display; the Valois were particularly adept, using displays of wealth to guarantee their status and military supremacy.³

Malcolm Vale notes that in this atmosphere of competitive magnificence, "courts were cosmopolitan places, accustomed to receiving a constant stream of envoys, guests, visitors, entertainers, and performers of all kinds. It would be surprising if their 'culture' did not embody and express that cosmopolitanism."⁴ In other words, the affinity of the court allowed the tastes and practices of the higher echelons to trickle down among the variety of urban service- and craftspeople, among other witnesses to court style. This high

level of interaction with the urban localities of the major European courts suggests an interdependent model for participation in a variety of forms of magnificent display among the lower classes, particularly among the crafts-classes whose talents fed the courts' conspicuous consumption of exotic objects and phenomena. In short, the noble interest in marvelous display was dependent upon—and inclusive of—the craft-classes of Europe's elite cities.

Throughout the fourteenth century, as European elites participated in the dialectic of mutual consumption, ordering magnificent gilded ostrich eggs and table-fountains, *automata* and stage effects, replications of exotic locales, and lavish displays of bulk-weight wealth, a generation of craftsmen flourished by producing these objects for their masters.⁵ The names of technicians and artists such as horologist Giovanni DiDondi and sculptor Claes Sluter are familiar, but to produce the wealth of objects in circulation among the elite classes of late fourteenth- and early fifteenth-century Europe required thousands of now nameless artisans and craftsmen.

Vale notes that across Europe, not only in Paris but in Prague, Milan, Brussels, and in Westminster itself, the proximity of court and city life were creating an inclusive atmosphere through high-status arts patronage. Not only the nobility, but also the high clergy and *haute bourgeoisie*, participated in an umbrella of patronage extending well beyond the direct influence of the monarch, so that "none of these spheres of patronage were, in turn, entirely isolated from the beliefs and concerns of 'low' culture (for example cults of saints, pilgrimages, and magic)."⁶ It was inevitable that magnificent displays of marvels should have spilled into the streets at times, as commoners and the growing middle class participated, however, silently, in this arena of magnificence.

Although this porous social atmosphere created myriad opportunities for the interclass experience of manmade *mirabilia*, we must be careful to distinguish, where possible, the differing affective responses prompted by encounters with *mirabilia*. Later, I look at how contemporary chroniclers read the marvelous event of Richard's coronation pageant, and attempt to reconstruct part of the unrecorded experience of the larger population of witnesses to the first pageant of its kind in European history.⁷ I conclude by asking how the pageant's marvelous mechanism, an angelic automaton, made its way into one of the great moral allegories of the period, William Langland's *Piers Plowman*. First, however, we should look at how such pageants developed out of the collaborative intersection of noble image-making projects such as arts patronage, collecting, personal display, and the prerogatives and politics of craft.

Collecting Status

Patronizing the arts to procure political status at the national level may seem alien in the post-Reagan era, but in the fourteenth century the theory

of governance characterized as “magnificence” was being refined into a potent tool among nascent forms of personal rule. Kings and courtiers from Lombardy to England turned from displays of military prowess toward fashion, ornament, and personal display to underscore the majesty of their rule. This emphasis on display was realized in elaborate courtly exhibitions of deep political import, and the court marvels of the later fourteenth- and early fifteenth centuries were part of this vast program, bent on refocusing royal power in the wake of the erosion of monarchic prestige.

Despite its obvious classical roots in Aristotle, it would be an error to see courtly magnificence solely as an expression of proto-humanistic endeavor, for the basis of its ideas and practices is also tied to the burgeoning “mirror for princes” genres of the late Middle Ages, which also informed the topoi of monarchic image-projection known as *Rex imago dei* and *le roy sage*. The idea of *Magnificencia*—the medieval theory of extending political power through opulent displays and wondrous works—held currency among Europe’s elite long before John of Trevisa translated the *de Regimine Principum* during the reign of Richard II. Brunetto Latini, known among literary scholars as Dante Alighieri’s master, gained far greater fame in his day through his French-language compilation, *Li Livres dou Tresor*, in which he outlined the underlying aspect of late medieval political theory that concerns us as we trace the culture of manmade *mirabilia*. The virtue of magnificence, he wrote, “is concerned with great, marvelous things, such as building temples and churches and other lofty undertakings for the honor of Our Lord.”⁸ He goes on to outline magnificence as a combination of conspicuous luxury and the projection of style, cautioning the practitioner to tread a careful path between magnanimity and thrift.

Of primary importance in this classical model are the great public building projects undertaken to promote public acclaim. In the medieval period, this classical urge to build was channeled into a revision of the defensive structures of the feudal era, as elites reconfigured their architectural needs to the new paradigm of luxury, comfort, and lavish display. The grim fortresses gave way to a new practice in architecture that has invited historians to label these structures as “palaces” rather than fortresses. The magnificent Castello Visconteo at Pavia is widely considered an early example, a modern Renaissance palace ensconced in a medieval fortress, and Richard II’s building program shows this sort of innovation as well, for the emphasis in his architectural program was on display rather than defense.⁹ Anthony Emery has recently noted that the many moats, towers, and other familiar defensive structures built during Richard’s time were merely “the trappings of defence. . . simply for show and splendour,” essentially “a statement of lordship” rather than purpose-built for war.¹⁰ Even Richard’s bestiary at the Tower of London, a pale shadow of the bestiaries of the Valois and Visconti, held only scant interest as a locus of his personal magnificence.¹¹

Instead, the young monarch and his court sought to compete with continental courts on the field of magnificent—and often marvelous—courtly performance and personal gesture and display.

Brunetto Latini's vernacular account demonstrates an increasing interest in the classical idea of magnificence, but the Latin *De Regimine Principum* (ca. 1280), Giles of Rome's thesis on Aristotle's *Politics* and *Nicomachian Ethics*, had far greater influence in promoting it as secular doctrine. Giles is thought to have produced this treatise for the instruction of dedicatee Philip IV "the Fair," who would amass an enormous collection of natural and manmade *mirabilia*, incorporating their presentation directly into his practice of rule. Significantly, Giles's *De Regimine* eschews discussion of religion, establishing a separation between the classical theory of *magnificencia* as religious architectural endowment, and a new means of showing magnificence through secular practices of individual courtly display, in effect creating a new theory of personal rule. Giles's work had wide currency, and is thought to have directly influenced Richard II, whose tutor, Simon Burley, owned a copy.¹² Some have even supposed that John of Trevisa's translation into English could have been undertaken in response to Richard's extreme policies, but even if Richard had no access to the English text, it seems clear that his practice of kingship incorporated the theory of magnificence, based on Aristotelian views of rule through the power of sumptuous display.¹³

Whatever his theoretical sources, Richard was working from a solid foundation in court practice: as early as the mid-1330s, the Visconti, with whom Richard would deal almost from the inception of his rule, had engaged in the politics of display to secure complicity in the further development of the Milanese state. Dominican chronicler and Visconti apologist Galvano Fiamma, looking back on the family's history in his *Opusculum de rebus ab Azone, Luchino, et Johannes Vicecomitibus*, theorized the political implications of the family's great works through Aristotelian magnificence.¹⁴ Titled "De magnificentia edificiorum," the chapter details not only the building projects undertaken to underscore Visconti magnificence, but also shifts focus to catalogue the wonders crafted to grace the inside of their halls. The "marvelous workmanship" included the metal screens and fantastic gems, carvings, fountains, and weighty gold chalices, and the marvelous clockworks installed to underscore the importance of Azzone Visconti and his family. Louis Green captures the connection between the political necessities of rule and the economy of wonders embedded in practices of court style:

To covey a clearer impression of how the theory of magnificence was understood. . . while we tend to think of it as applying essentially to art, for Fiamma and his contemporaries the purpose for which it was invoked was to enable effects to be produced that would excite a sense of wonder. Novel mechanical

devices such as clocks, exotic animals and birds, and the lavish use of precious materials were meant to contribute to the emotional impact. . .¹⁵

Although based upon the classical program of magnificent architectural patronage, the medieval chronicler's narrative instead focuses on courtly splendor, confirming the fourteenth century's shift in emphasis from architecture to extravagantly crafted luxury for the reification of courtly identity. As if to underscore the relationship between these urban courts and the craftsmen who enabled them, he proudly listed the sculptors, copyists, glaziers, carpenters, and a variety of other craftsmen engaged in the production of all this splendor.¹⁶

Azzone's grandson Bernabò proved an extremely successful practitioner of magnificent courtly identity-projection, and under him the later Visconti achieved enough status to place them among the foremost families in late fourteenth-century transalpine martial politics. In fact, Geoffrey Chaucer, whose ample contact with magnificent manmade marvels I trace in succeeding chapters, spent a great deal of the summer of 1378 in Milan, absorbing the ideological implications of Visconti magnificence. Indeed, it could be argued that Chaucer's visit was in part an effect of the Visconti's successful program of courtly magnificence, for Bernabò had opened marriage talks with the English court almost as soon as young Richard assumed the throne; Chaucer was sent there to arrange for the hand of Caterina, daughter of the Duke of Lombardy.¹⁷ We also should probably thank Bernabò's copyists for Chaucer's ability to bring home the *Teseida* and works by Petrarch, and there can be little doubt that the Visconti taste for opulent display influenced the baroque architectural visuality of Chaucer's *House of Fame*, written soon after his return.

The elevated court style of Italy had originated in the courts of Frederick II of Sicily, and in Angevin Naples during the previous century. These courts, by no coincidence, were the earliest conduits for the entry of fantastic *automata*, clockworks, and other manmade marvels entering Europe, as technical knowledge from the Arab world found its way north and east in the wake of the crusades. In France this emphasis on style had developed among Valois predecessors, as John the Good (d. 1364) and Charles V (d. 1380) cultivated manners, gesture, courtly behavior, and display, employing a variety of entertaining automata and other special effects in courtly performances.

Although the Black Prince had promoted courtly display while in Aquitaine, it was at home that the practice was honed, for as Ralph Griffiths has noted, in Richard's lifetime,

English kings sought to project visually by magnificence and ceremony designed to impress and impose the king's majesty and power on subject and

visitor alike, partly (it must be said) in imitation of the French example. . . we should probably look to Richard II's reign, perhaps even to Edward III's, for major departures in the court's evolution.¹⁸

In England, Richard's emulation of his continental elders through magnificent display and support of the arts was a substantial break from the hegemony of the militarist regime whose primacy died with the Black Prince. Brought to the throne amid pomp and wonders at a tender age, from the very beginning Richard's persona as a ruler was predicated upon calculated display rather than military prowess. Throughout his reign, he stylistically emulated and competed with the rulers of France, Italy, the Low Countries, and other continental hubs of arts production, with whom he contended through the politics of display.

Early in his reign, Richard began to articulate a vocabulary of power based on the projection of a performative self, and in his well-known competition with and emulation of Charles V of France, Richard followed a successful paradigm of courtly self-fashioning.¹⁹ Charles's primary image as a ruler was *le sage roy*, the king whose Solomonic wisdom would promote correct rule through the sponsorship of learning and arts patronage. Christine de Pizan's 1403 *Le Livre des fais et bonnes meurs du sage roy Charles V* used the Aristotelian material in Thomas Aquinas and Giles to delineate his monarchic career, characterizing his interest in the science of astrology and his ability to address as equals the learned men of his day.²⁰ Christine's greatest emphasis in her section on *sagesse* focuses on the king's patronage of the arts, including architectural and manuscript production.²¹ Donal Byrne has argued that in the context of the "magnificent array" of translations effected for Charles, books like the monarch's French translation of *De proprietatibus rerum* by Bartholomaeus Anglicus must be understood as a projection of *le sage roy*, and he joins other scholars in noting the "audacious annexation" of such texts into the iconography of a royal image-building program that "did everything possible to underline the supernatural connection" typified as *Rex imago Dei*, the king as God's temporal image.²² In this sense, Charles's calculated use of a clerkly image literalizes one biographer's opinion that to Charles, "the book should be an aid to good government"; for indeed his books, and the access to them that he provided, projected his magnificence, a practice paralleled at the Castello Visconteo, family seat of the Dukes of Lomabrdu in Pavia, where the marvelous Astrarium of DiDondi was installed.²³

Collections and the Display of *Mirabilia*

As the culture of manmade marvels emerged in the twelfth and thirteenth centuries, the treasuries of Europe's cathedrals and royal families were

replete with objects both marvelous and miraculous. At the core of most early intergenerational collections were the reliquaries serving as earthly conduits for the divine: the bejeweled casks, glazed containers, and even mimetic representations of anatomy such as golden reliquary heads, reminiscent of the augury heads implicated in the fantastic tales of *automata* created by Roger Bacon and Albertus Magnus.²⁴ The rich vestments and other *miscellanea* of liturgical practice, including miters, missals, and pallia, were joined by the regnal scepters, orbs, embroidered robes and other ceremonial regalia of secular rule, including such *signe* as a gift Richard II made to the Valois, breathlessly described by Georges Chastellain:

... a clasp with King Richard's device of a stag, ornamented with twenty-two large pearls, two square *balais*, two sapphires on one side and a ruby, with a large square diamond the size of a hazel-nut.²⁵

Most collections also contained volumes of natural wonders, the unicorn horns and other *mirabilia* adapted from romance tales, such as the Horn of Roland owned by French kings since the eleventh century, the giants' teeth at Trapani noted by Boccaccio, magical lions' skins, and the volumes of gems associated with marvelous properties.²⁶

The fourteenth century saw a shift toward individual collectors, as personal collections such as those of the Visconti dukes, or Jean, Duke de Berry, began to take shape as individual expressions of sociopolitical power.²⁷ Collections secularized and expanded to incorporate a variety of rare objects deliberately assembled to invoke wonder, including books and works of art, as well as rare astronomical instruments, novel clockworks and *automata*, and a variety of eastern exotica. Katherine Park has described these "reservoirs of power" in terms of their combination of symbolic and literal effects.²⁸ Even the specifically natural objects had properties that contemporaries regarded as marvelous, such as the healing qualities of propertied gems, animal parts, and rare exotica including ostrich eggs, griffin's claws, and a variety of extraordinary zoological phenomena, from snails' shells and coral to the desiccated bodies of alligators and the petrified shark's teeth known as serpent's tongues.

Jean de Berry, for example, owned a marvelous golden cup given by the English king, in which were secreted bits of unicorn horn and other palliatives against poison, and Charles, Jean, Richard, and others owned numerous jewels, belts, pendants, and other items of dress that guaranteed relief from the potential effects of hidden poisons, further implicating display in the deadly vagaries of rule.²⁹ No surprise then that in William Langland's moralization on treasure versus truth, the ambivalent courtly figure of Lady Mede would be introduced first through her jewelry, including "ewages envenymes to destroye."³⁰

Whatever we may conclude about Langland's attitude toward such lavish displays, the late medieval nobility's signification of power through outward displays of personal *richesse* dovetails with perhaps the most familiar aspect of courtly magnificence: noble dress. The stakes for this kind of display are widely noted in biographical accounts of Richard and in the complaint literature of the period, perhaps reaching their zenith in Richard's troubled later years. At his meeting with Charles VI at Ardres in 1396 to arrange Richard's marriage to Isabella, amid lavish exchanges of priceless gifts—which were nevertheless priced carefully by the chroniclers—the two monarchs vied with one another on the field of sartorial display, and in the end, it was Richard who won the day by outdressing the French monarch, whose repetitive wardrobe choices could not withstand the battering dealt by Richard's opulent blue and gold velvet.³¹

Richard was certainly well known throughout his rule for his extravagance and investment in seemingly superficial display. He delighted from an early age in the pomp and ceremony of rule, taking every opportunity to revel in the lavish performance of court culture. Richard promoted a material symbolism unlike any English ruler before him, drawing complaints that none other had “helde swich an household be þe halfdelle / As Richard. . .”³² His expenditures on magnificent surroundings, courtly accoutrements, and maintenance of his entourage became so burdensome that by 1397 he was openly contesting the assertion of the parliamentary petitions to reduce the excessive costs of his household.³³ Household expenses increased from £13,000 pounds in 1390 to £35,000 in the year of his demise.³⁴ Clanvowe, describing his fellows at court, notes that they “wasten and ȝeuen much good to hem þat haan ynouȝ, and þat dispenden outrageously in mete, in drynke, in cloþing, in buyldyng, and in lyuyng in eeese, slouþe, and many oopere synnes.”³⁵

He held a personal delight in the luxuries of elevated court style, acquiring assets such as a golden altar cross covered with over 400 pearls, and numerous examples of golden plate and other wares from London's thriving Goldsmiths.³⁶ Patricia Eberle has noted the deliberation with which Richard cultivated magnificence to enforce his increasingly autocratic form of personal rule, and there is a rich scholarship on the politics of personal presentation, and especially of dress, at the Ricardian court.³⁷ In England as in Europe, rulers complemented their finery by engaging in elaborate distancing tactics, including elevations, intermediaries, and extravagant gestural politics.³⁸ Increasingly during the course of his reign, Richard demanded stringent protocols of deference and address to underscore the magnificence of his person and the status of his reign, drawing criticism from the Westminster Chronicler and others who felt that his investment in personal magnificence was getting out of control.³⁹

The importance of display to men such as Richard may seem shallow and even picturesque, a perception perhaps enabled by the many attacks on his extravagance in the wake of his deposition, which testify to the degree Richard was associated with his collections.⁴⁰ But as Saul has pointed out, it would be an error to attribute Richard's spending solely to personal caprice.⁴¹ In the court life of the period, style was politics, and every form of display was a test, sometimes with lethal consequences. Diplomatic records of the period are filled with incidents in which strategic decisions affecting the clash of nations could turn on the perception of an opponent's wealth as proved through magnificent display. In Europe the Valois demonstrated their ability to invade Utrecht in 1456 by displaying their incalculable wealth in gold plate and other treasures at the Hague, and in England the need for maintaining high levels of display to guarantee internal allegiances became the undoing of the parsimonious Henry VI, who was thought a poor ruler for his poor appearance.⁴²

Perhaps the clearest textual example of Richard's political investment in magnificent display comes from the *Liber Contra XII Errores et hereses Lollardorum*, presented to the king by apologist Roger Dymock to counter the twelve conclusions of the Lollards posted around 1395, just months before Richard embarked upon his campaign of spectacular style in dress at Ardres. The Lollards' twelfth conclusion goes directly to the heart of the doctrine of magnificence, in an attack on the extravagance of crafts such as goldsmithing, which "schulde ben distroyd for þe encreas of vertu:"⁴³

... þe multitude of craftis nout needful usid in our Chirche norisschith
 michil synne in wast, curosite and disgysing. . . for nature with a fewe craftis
 sufficith to need of man.

The Lollard position specifies the negative effects of superfluous crafts, specifically naming armorers and goldsmiths but also implying, through "curosite and disgysing," the extravagant courtly milieu in which these crafts were centrally and explicitly engaged.

Dymock's reply in Latin is lengthy and understandably sympathetic to the political necessities of display, defending goldsmiths and other craftsmen in the context of promoting correct rule.⁴⁴ In countering the religious aims of the Lollards, Dymock veers from theology directly into a political defense of magnificence based upon Aristotle's *Nichomachean Ethics*, in a deliberate connection between the politics of courtly display under Richard and the greater political ideology circulating throughout Europe.⁴⁵

As a marker of the kinds of ideas circulating in London's courtly setting, we should note that Dymock marshals the example of Alexander the Great,

an ambivalent figure intimately tied to the pursuit and fabrication of *mirabilia* but also a superlative example of kingship:

Hence in the *Secretum secretorum*, Aristotle enjoined Alexander never to appear to his people in public except in appropriate, indeed in magnificent array, that by consequence thereof he would be held in greater esteem.⁴⁶

But if Alexander presents a somewhat ambivalent example, Dymock inadvertently exposes the underbelly of marvelous arts production in a later segment of his defense, treading perilously close to the darker edge of the craft production of manmade *mirabilia*. In the fourth chapter of the *Liber Contra Errores*, on the sins engendered by forms of surface disguise, Dymock acknowledges the possibility that craftsmen could make objects wholly dedicated to sin, for “were someone to fabricate idols or anything pertaining to an idolatrous cult” he would agree with their destruction, as he would practitioners of the forbidden arts of sorcery, necromancy, and divination.⁴⁷ Dymock may not have made a specific connection between the crafts and the animation of idols, but he concludes the defense of goldsmiths by mentioning a figure whose importance will be made clear when we rejoin Richard’s coronation. Dymock rhetorically emphasizes an intimate connection between court policy, the coronation, and London’s crafts, noting that “it is even written that St. Dunstan had been a goldsmith and had made many a vessel, skillfully, of gold and silver.”⁴⁸ To Londoners of the period, Dunstan was patron saint of the goldsmiths, and also was the author of the coronation *regula* that had governed the coronation of Richard II in Westminster on the June 16, 1377, in the bright youth of Richard’s court; the saint is one thread in the web of marvelous arts production that leads from the court of Richard to the streets of London.

Hybrid Engins: From the Court to the Street

In the hothouse environment of arts patronage under the Ricardian affinity defended by Dymock there flourished some of the medieval period’s most fascinating manmade marvels, as well as the records of the responses they provoked. Yet while some attention has been given to the texts describing them, there is little sustained critical analysis of these devices, their makers, and the cultural fields in which they proliferated after their initial embodiment. I find it interesting that these manmade marvels, the focal elements of so many performances, as well as some the earliest and most awesome examples of craft *mirabilia* ever witnessed, seem to fade into the background of the uniformly excellent critical work on courtly display.⁴⁹

Part of the problem may lie in the ephemeral nature of the performance and the event. The lack of surviving *mechanicalia* from the most elite performances, such as the coronation of Richard, the arrival of Anne in 1382, or Richard's Reconciliation Pageant of 1392, may be attributable to the whiff of idolatry coming off the potentially mobile body of a disused mechanical being. Or it may be a bit like reading Mandeville's *Travels*, in which the endless catalogues of wealth, lavish displays, marvelous objects, and cultural dislocation simply flattens our perspective, reducing the shock of the *outré* and numbing our capacity for wonder through the sheer accumulation of detail. I suspect, though, that the very nature of the most extravagant manmade marvels, the *automata* and other complex *mirabilia*, were far enough outside the scope of the daily pursuit of sociopolitical capital that they simply did not factor as easily as the more "common" marvels of architecture, clothing, and lavish gold plate, which provided a broader field for consideration.

The power of these more elaborate marvels, though, was articulated through chronicle accounts of magnificent material presentations, and distributed along associational lines predicated upon a multilingual, trans-European nobility, rather than within the localized textual vernaculars in which their actions were recorded. But prior to such late, carefully verbalized articulations of princely power, the development of a vernacular of power was rooted not only in the works of local poets such as Chaucer and Gower, but in the visual-material culture preceding their responses. The position taken by the Latin chroniclers and vernacular poets may be summed up in Lynn Staley's helpful assertion that for writers, "the stories comprise far more than events" in the projection of princely power, as writers aligned history with the more durable cultural capital of texts, over the less historically tenacious, although initially "profoundly embodied," material practices that the poets re-presented.⁵⁰ Paul Strohm too addresses the reciprocal and even generative aspects of materiality through Pocock's ideas about language, by reincorporating the material context of language production. However, for the purposes of understanding the relationship between linguistic discourses and material contexts, to Strohm, "All this comes down finally to words," affirming the more durable power of the intertextual world of inscribed discourses.⁵¹ But while chroniclers and poets play a vital role in formulations of princely power, I would suggest that we remember that their work is dialogic, and collaborative with the already embodied narratives critics are so quick to discard, the traces of material articulations of political power *in situ*.

Manmade marvels—these material, multivalent, corporate expressions of political power—therefore offer a material corollary to the articulation of power through language, through their necessary engagement in the

production of embodied narratives. Given the extent to which my own work plays on the notion of extracting the ghosts of these machines and their silent makers from texts, I find that after-the-fact inscriptions bearing the extant traces of court *mirabilia* had little place in the workshop and on the streets, where marvelous bodies acted in and upon the world through the motion of articulated joints, the acquisition, cost, and manipulation of materials, and the skill of the craftsmen. Only later would they be defined through the symbolic capital to be acquired through the lens of inscription. Particularly given the technological and performative innovations of these clever devices, the physical situatedness of the marvel must be read as a generative text, a narrative informing later efforts to inscribe authority long after the machines had left the street.

This “street” here metonymically refers to the workshops, guildhalls, and other low public spaces where manmade marvels were witnessed outside of the courts. Such spectacles were becoming increasingly common in late medieval urban life, as public performances attended by nobles and commoners alike became infused with the technological advancements augmenting traditional forms of display. Processionals, with accompanying ridings, pageants, and public tableaux, were the most common form of community display in Europe.⁵² Such performances had for centuries enhanced the emotional experience of the encounter between nobility and the commons with wicker giants, costumed wildmen and devils, and other embodiments of the preternatural.

Eventually these formless, unscripted early medieval celebrations accompanying processions were organized into the first scripted pageants associated with aristocratic ridings. The earliest of these recorded in Europe were the 1377 coronation pageant and later matrimonial entries of Richard II’s reign, interspersed in the 1380s by French pageants of equal grandeur but less public exposure.⁵³ The first of these, already described earlier, was located upon the Great Conduit at the intersection of Chepe and Bordhaw Lane at Poultry Street, where the Worshipful Company of London Goldsmiths constructed a wondrous “*somercastell*” or pageant tower, draped the tenements and shop-fronts with bright cloth, and hired a host of musicians to temporarily transform this workaday mercantile junction into a Heavenly Jerusalem presided over from on high by a golden mechanical angel, waiting with golden crown in hand for the next day’s monarch to pass through the goldsmiths’ neighborhood on his official itinerary.

This angel was an automaton. There is no record of its construction or of its eventual fate, but for a brief moment, it was the focus of London and, by extension, the entire English nation. As we review contemporary accounts of its performance, we will see how, within the prerogatives of the coronation, the marvel’s creators devised it with a cunning that

allowed it to appropriate an historic national event to transient local ends. The pageant angel was their inscription, their narrative record of local identity. When it was dismantled after the coronation, its story, like a lost chronicle, was subsumed into the detritus of history to which the angel's gilded components were no doubt returned. The local counter-narratives and subtexts that its embodiment spawned vanished almost as quickly as the device itself, leaving only the official chronicles, and, like some wayward acquaintance, the bill for the pageant, recorded in the Minute Books of the Goldsmiths' guild. Ever since, the role of this automaton, the first documented use of such a device in English pageantry, has gone almost completely uninterrogated.

“Subtil Craftes”: *Automata* and Medieval London Politics

Before addressing the pageant and the performance of its angelic automaton, I want to set the scene in the broader context of London's political culture. The coronation of Richard II put the city at the center of national anxiety and instability, for Edward III, whom Richard succeeded just days after his death, had held the throne weakly since the death of the Black Prince, the heir apparent, who had died the previous summer. Richard's coronation placed the hope of restored stability on the head of an eleven year-old boy.

Already London was roiling amid uncomfortable challenges to the ruling oligarchy in the Good Parliament of the previous year. Tensions also had been rising among the trades throughout 1376, as John Northampton maneuvered a shift in the Common Council so that mayoral elections were determined by professional craft affiliation rather than by ward, breaking the “virtual monopoly of power” held by wealthy aldermen and controlled by victualling trades.⁵⁴ Deriving influence from a bloc formed during 1376 through meetings at the Goldsmith's Hall in Chepeside, Northampton's cause was strengthened through his affiliations with what Thomas Usk would repeatedly call “persones of diuers craftes” and others termed the “commons” among the crafts.⁵⁵ The move created two parties; Northampton's, aligned with the craft guilds, and Mayor Nicolas Brembre's, composed of victualling and related interests sympathetic to the Crown.⁵⁶ Chroniclers such as Walsingham, who clearly disliked Northampton, and the Westminster chronicler, who remained neutral, nevertheless appear to have agreed that Northampton moved beyond the usual complaints against London's regraters to actively oppose monopolies by victuallers such as the powerful Fishmongers.

Given London's atmosphere of heightened tensions around new forms of association, including maintenance and the highly visible symbolism

of livery, the underlying tensions that culminated in the executions of Northampton and Usk several years later were already afoot in the mercantile wards of the city on the eve of Richard's coronation. In preparation for the coronation events, and anticipating a heightened degree of inter-guild strife expected during the celebration, the atmosphere of accord was enforced through an order of compulsory disarmament in the days leading up to the July 16, 1377 Westminster ceremony. This order was clearly directed at the commoners, for Gaunt and the nobility accompanying Richard through Chepe remained armed.

Further, the Goldsmiths' position in city politics had been eroded by internal strife, as William Fitz Hugh and fellow complainants championed lesser craftsmen against the wealthy Goldsmiths who controlled the craft. This internal dissent, coupled with the guild's role in destabilizing the power of the great companies, placed the Honorable Fraternity of St. Dunstan squarely in the surging "currents and cross-currents of national and civic strife."⁵⁷

The generalized political competition among craft and victualling guilds acquired a geographic dimension through the coronation pageant, which oriented the event around a powerful and contentious symbol of London's mercantile interests: the Great Conduit, in the 1370s the most important secular structure in the locality.⁵⁸ The Conduit was the primary source of water for this wealthy neighborhood, mostly inhabited by craftsmen from the metalworking trades.⁵⁹ The castellated structure, built in the middle of the street before the Hospital of St. Thomas of Acre, was worked so deeply into the local identity that many wore it as the family patronymic, and it was used for a variety of symbolic public events. It also was the source of constant complaint and bickering over the supply of water, and the victuallers—especially the Fishmongers, who needed much water to ply their trade—were always at the center of disputes about overdrawing and otherwise interfering with local residents' access to the precious supply of fresh water. But on the morning of July 15, as the great companies demonstrated their power through liveried procession, the edifice was wholly in possession of the Goldsmiths, and all eyes would soon turn from the young prince at the head of his procession to gaze in awe at their golden pageant angel.

James Simpson has convincingly connected processional imagery in the Pentecostal passages in *Piers Plowman* to the political strife between craft and victualling guilds outlined earlier, noting Langland's allegorization of a "theatrical angel" during the Lord Mayor's procession. Rendered as the descent of the Pentecostal spirit, the angel in the roof of St. Paul's appears in the poem thus (B.xix.203, 206–7):⁶⁰

In liknesse of a lightnynge he lighte on hem alle
/. . . /

... / for in fires liknesse /
 Spiritus Paraclitus overspradde hem alle.⁶¹

Simpson prefers to think of this angelic image as a material analogue to the Lord Mayor's procession, complementing the liturgical underpinnings of the scene. Despite this, Simpson carefully hedges against insisting on a direct correlation between the censuring angel hanging from the beams of St. Paul's and the descending spirit in Langland's processional image, instead preferring to see the material connection as an avenue for connecting Langland's greater allegory to London politics.

But if the Lord Mayor's procession formed part of the mental landscape of London lying behind the allegories of *Piers Plowman*, surely the connections between a pageant angel that handed a crown to Prince Richard before the assembled nobility and commons in Chepe offers grounds for consideration. Although occasionally acknowledged as an influential image, little has been said of the possible connections between the pageant's mechanical marvel and the appearance of the angel that descends from on high over the tripartite estates imagery of *Piers Plowman's* opening scenes (B.Prol.112–132):

Thanne kam ther a Kyng: Knyghthod hym ladde;
 Might of the communes made hym to regne.
 And thanne cam Kynde Wit and clerkes he made,
 For to counseillen the Kyng and the Commune save.
 The Kyng and Knyghthod and Clergie bothe
 Casten that the Commune sholde hem [communes]
 The Commune contrived of Kynde Wit craftes,
 And for profit of al the peple plowmen ordeyned
 To tilie and to travaille as trewe lif asketh.
 The Kyng and the Commune and Kynde Wit the thridde
 Shopen lawe and leaute—eeh lif to knowe his owene.
 Thanne loked up a lunatik, a leene thyng withalle,
 And knelynge to the Kyng clergially he seide,
 "Crist kepe thee, sire Kyng, and thi kyngryche,
 And lene thee lede thi lond so leaute thee lovye,
 And for thi rightful rulyng be rewarded in hevene"
 And sithen in the eyr on heigh an aungel of hevene
 Lowed to speke in Latyn— for lewed men ne koude
 Jangle ne jugge that justifie hem sholde,
 But suffren and serven—forthi seide the aungel:

This passage locates the king in the estate of the fair field, an image based on Langland's experience of the locality.⁶² Amid the London-centered urban themes of the B.Prologue's estates imagery, this passage shows convincing

allegorical parallels to Richard's coronation pageant, reinforced by the succeeding Latin passage describing the tripartite bonds enfolding the duties of kingship. The image of Langland's angel, if it is related to the coronation pageant's marvelous automaton, may help to explain the difficult textual crux at l.113, the image of a king given power by the commons, and an angel descending from on high to lecture the king on right rule.⁶³

In Langland's B.Prologue, the procession imagery is embedded in the contentious political environment of the estates, temporarily brought into accord around the coronation events. By contrast, the chronicles' images of the processional movement and descriptions of the pageant will preserve an itinerary of scripted unity, aligning contemporary political references to the accord the arrival of the real Heavenly City was supposed to bring, but never did.⁶⁴ Through attention to the performative narratives of civic identity and city geography centered upon the Goldsmiths' coronation pageant atop the Conduit, we can look at how this textual crux may be explained by the associational and political tensions lurking beneath the official transcripts' picture of civic accord around the Conduit that morning.

The Heavenly City that the Goldsmiths contrived was composed of symbolic objects and actions laid over the mercantile district's bustling streets, a palimpsestic Holy City built to accommodate a procession of nobles from London and the provinces.⁶⁵ This procession was composed of a superclass of landed gentry, who entertained a view of London mediated by the centrality of their class in the solemn coronation events in which they participated; their primary interests lay not in the streets of London but with their provincial estates and, locally, on their status within the royal procession.⁶⁶ For the noble contingent who would view the pageant, a Heavenly City laid over workaday London formed a text of selfhood. This mounted gentry associated itself with crusading and the ultimate achievement of the Holy Land. To them, the location of a Heavenly Jerusalem pageant in the shadow of the Hospital of St. Thomas of Acre, birth-site of London's patron saint, whose intercession was credited with the taking of Acre in Syria, would seem *apropos*.⁶⁷ That an apparently miraculous angel should move to crown the prince in the midst of this Heavenly Jerusalem must have seemed a reasonable assumption given the semiotics of the pageant within a procession that would end the next day with Richard's spiritual conversion through application of the Holy Oil.

The Goldsmiths' pageant appropriately signified crusading to the nobility processing by the Hospital of St. Thomas Acon, bishop of London, on that morning. But to get beneath this surface script, the Holy City erected by the crafts in Chepe requires excavation, an archaeology of sediments of buried meaning. Stipulating the dominance of the procession and ensuing

chronicle narratives created for these noble passersby, we are nevertheless obligated to ask after the counter-narratives and metaphorical side-streets, the meanings apprehensible to the locals through their urban identity and spatial practices.⁶⁸ The “local authority” of their pageant—centered on the Conduit at Chepe and Bordhaw Lane—was the object of erasure by dominant forces, who used a scripted procession to write over or “annex to a past or poetic realm” the pageant’s overt references to crusading, in effect overwriting the local interpretations of social spaces enacted through the pageant. Since all of the texts offer perspectives on a specific material object (the pageant and its angel), we can use them to read “beyond the limits that the determinants of the object set on its utilization”; in other words, the pageant could signify on several unscripted levels.⁶⁹

According to the chronicles, the day’s events began with a procession from the Tower, as Prince Richard, clad all in white, “a huge crowd of peers, nobles, knights surrounding him, and squires in his train,” proceeded through the sweltering St. Swithun’s Day morning.⁷⁰ The prince’s horse was led by Nicholas Bonde, Simon Burley held his sword, and John of Gaunt apparently showed unaccustomed restraint in parting the teeming crowds of commoners for the prince. Coming through Chepe, the procession halted before the Conduit, upon which the pageant tower representing the heavenly Jerusalem had been erected by the goldsmiths. Wine flowed miraculously from the conduit into tubs for the relief of the assembled locals, and four women in white spread gold-foil coins upon the prince’s retinue; above, a golden mechanical angel emerged from a belfry, and bent down with a crown for the next day’s monarch.⁷¹

Most well known is the account in the *Historia Anglicana*, whose narrator details the passing sites as if ticking off a grocery list, save for pausing to note the wonder of the marvelous mechanical angel atop the goldsmiths’ pageant.⁷²

There had been built a kind of castle, with four turrets, in the upper part of the public market, called the Cheap, from which wine flowed freely at two places. On its turrets were set four lovely maidens, clothed in white vestments, of the same size and age as the king, one on each turret. Upon the king’s coming forth in the distance, they poured out gilt leaves at his appearance, and, when he drew nearer, they scattered likenesses of gilt florins over him and his mount. When he had come up to the castle, they took down golden cups, and, filling them with wine from the spouts of the said castle, they offered them to the king and the lords to drink. Upon the castle’s pinnacle, which had been erected between the four turrets, in the manner of a belfry, had been set a golden angel, bearing a golden crown in its hands, which was constructed with such ingenuity that, upon the king’s coming forth, bending down, it reached out the crown towards him.

The other account is the *Anonimale Chronicle's* similarly arid, list-like rendering of the procession, broken only by the marvelous angel handing a crown to the king.⁷³

Set up in the middle of the Cheap stood a tower of painted canvas, curiously constructed, over timber support-beams; about the tower were four turrets, in which stood four damsels, exceedingly lovely and beautifully arrayed, and these said damsels threw gold coins in the direction of the prince's coming. Within the said tower had also been built a small belfry, and on the belfry stood an angel, bearing a golden crown, holding it out towards the said prince, to do him comfort.

These accounts agree on the details of the pageant in most respects. The chroniclers, whether active witnesses or, more likely, basing their content on verbal accounts, take a perspective we can characterize as synoptic, describing the events from a position exterior to the central event, narrativizing space as visiting witnesses to the proceedings.⁷⁴ The narrative exteriority or synoptic perspective of the chronicles is a by-product of the visitors' lack of a relationship with the neighborhood, with all of its localized politics, intra-hierarchical relationships, and perceptions of the meaning of lived places.

The chroniclers' narrative focalization renders London geography as a genre: the itinerary, a narrative map of here to there. Roy Strong once characterized the noble riding or procession as a "dialogue between a ruler and the urban classes," remaining tacit on the matter of who was doing the talking.⁷⁵ More recently, James Stokes has shown that the symbolic purposes of procession could be more transactional and geographically meaningful, signaling "theatrically conceived *maps* for illustrating legal, religious, and economic relationships" within the locality.⁷⁶ Richard's procession past the Goldsmiths' New Jerusalem followed such a map, but these maps often have been read only from the noble perspective.

The ultimate aim of medieval Christian *itineraria* was Jerusalem, so it would seem that the Heavenly Jerusalem pageant fashioned by the Goldsmiths would form an appropriate destination for the coronation procession. As a symbol of impending worldly order, it merged the locus of the church of St. Thomas Acre with the theme of coronation. But even as they understood the text of the procession, to the locals this same urban geography was rich in other meanings clearly apprehensible to those whose social identity as craftsmen and parish fraternity members had begun to eclipse the marital ties that still dominated noble life with what Unwin has identified as "the tie of neighborhood."⁷⁷

The chronicle records of this procession therefore set up a dialectic between the scripted itinerary, with its explicit reading of the event, and

the counter-texts necessarily implied by the city spaces virtually ignored by the chronicles' royalist intentions; or, to paraphrase De Certeau, the procession formed a space of enunciation overwriting the very streets of Chepeside, where "[t]he ordinary practitioners of the city live 'down below,' below the thresholds at which visibility begins."⁷⁸

These local complexities can be read in the political prerogatives of the Goldsmiths, and also glimpsed in the allegorical rendering, viewed from the interior of the scene by Cornhill resident William Langland, who makes the arrival of the King and the marvelous angel of the pageant the only self-consciously scripted movement in the *Prologue* of the B-text of *Piers Plowman*. His view, again probably based upon verbal reportage, presents a more dialectical relationship with the topography and social textures of the City of London, enacting within allegory the lived relationship of the neighborhood's denizens to the City and its rulers. It is a momentary glimpse of their praxis of city space, rendered in poetry, that may reveal something of the civic identity of the neighborhood and its craftsmen.⁷⁹

If we draw the chronicle history and *Piers Plowman* into a dialogue with the lives and lived perspectives of the craftsmen who lined the streets, whose point of view was determined by looking upward rather than down, and outward rather than through, the potential for alternate readings of the event begins to emerge. Noble pomp motivates different responses from the perspective of the streets, as Chaucer well knew when he characterized a young vicutaller's apprentice reveling in the streets as a "rydyng" or procession occurs (CT.CkT.13–8):

or when ther was eny rydyng in Chepe,
 Out of the shoppe theder wolde he lepe,
 Til that he hedde al the sight y-seyn,
 And daunced wel—he nold not come agayn
 And gadered hym a mayny of his sort
 To hoppe and synge and make such disport.

To look upon this young man, whose inclination is to gather his fellows from the neighborhood and take the weighty matters of state pomp as an opportunity for revelry and free association, is to begin to adopt the perspective of the locality, of the merchants, craftsmen, and other commoners thronging the crowded Chepe that morning.⁸⁰ The chronicles situate the iconographic power of the pageant within the greater trajectory toward the Westminster coronation, but if we recall the perspective from within the neighborhood, and within which Langland's London-centered poem is situated, other possibilities for local views on the pageant may emerge.

The adjacent church of St. Thomas of Acre was London's link to its most popular saint and to the Holy Land; inasmuch as the merchant citizens identified themselves as a part of Christendom, the pageant site on the Conduit identifies the mercantile community with its spiritual stake in the greater world. London could thus identify itself with the Heavenly Jerusalem through the site. For the residents of inner London's mercantile district, the pageant tower represented a symbolic order *culminating in the locality*, for the Heavenly City was teleologically identified with the sort of spiritual conversion that would consecrate the prince as king. But before we come to the meeting of the king and the angel symbolizing this conversion, we should look to some of the other potential avenues of symbolization at play in the street that morning: markers of meaning that were not relevant—or even visible—to the noble passersby or the chroniclers who later inscribed their experience of the pageant.

We would do well, for example, to remember that the pageant was produced by the Goldsmiths, known in that time as the Fraternity of St. Dunstan, and their corporate identity as craftsmen was also present upon the pageant tower. Gordon Kipling has dispelled the empty notion of simple textual or trade-symbolism influences in the production of Richard's pageants, confirming the presence of governing symbolization of varying complexity.⁸¹ He reads in the New Jerusalem pageant imagery a figuration of Richard as Christ, but the pageant's co-references to St. Dunstan form another symbolic anchor, a focal point for neighborhood and professional identity affixed to the Great Conduit in Chepe. City records inform us of the high density of metal craftsmen in the neighborhood, occupying a significant percentage of the available housing, workshop, and retail space. The most important company of such craftsmen was the Goldsmiths, whose hall was the site of Usk and Northampton's meetings with the crafts in 1376, as well as Fitz Hugh's ongoing insubordination. In contrast to this anchoring site of civic identity, even the elaborate processions of liveried guildsmen would have seemed a river of passing color parting around the edifice unquestionably possessed by the Goldsmiths on that morning.

St. Dunstan, patron saint of the Goldsmiths, was as present in the streets of Chepe that day as the angels so closely associated with the craftsman-saint's iconography (see figure 1.1). The saint, portrayed here as a metal craftsman next to a harp-playing angel, was a constant guide in the lives of the Goldsmiths, all honorable members of the non-parish Fraternity of St. Dunstan from which their trade guild had developed. The Fraternity's calendar was oriented to the Saint's day on May 19, and their Minute Books overflow with references to alms and fines for St. Dunstan's fund. In the records from the company's Minute Book A+a, the entries preceding the coronation frequently refer to the rebellious William Fitzhugh's penalties



Figure 1.1 St. Dunstan in his workshop with angel on pedestal (detail from MS.BL.Royal 10 E.iv.fol.250, courtesy of the British Library)

paid to St. Dunstan, and the saint's *vita* was rehearsed during mandatory attendance in the nearby guildhall only weeks before the coronation.⁸² Thus the craftsmen gathered there might have seen in the miracle of the coronation pageant's flowing wine an echo of the story of Dunstan producing water from a rock for an elderman's civic celebration; the many angels and musicians recalled the saint's numerous visions of singing angels, as well as the miracle of his self-playing harp; the golden angel automaton itself conflated the saint's penchant for metal-craftsmanship with the skill of the London craftsmen; and the coinage tossed out by the girls dressed as angels similarly conflates the saint's legend with the quotidian work and political realities of London goldsmithery under the Crown.

Finally, and perhaps most significantly, the angel's automated move to crown Richard would have invoked associations in the craftsmen's minds between their guild's patron and the key role of St. Dunstan in English coronations going back over 300 years: Dunstan famously chastised Eadwig in 956 for casting his crown to the floor during an act of *luxuria* or lust committed after his coronation; the saint designed the coronation crown for king Edgar himself ca. 960; and was credited for sacralizing the English coronation ceremony, making explicit the bond between the monarchy and the church that Richard would enact through the coronation *ordo* in Westminster. Thus to the locals, the mechanical angel's part in the greater narrative of the pageant represented a connection between the guild and the monarchy, making explicit their part in the bond between the monarchy and the church that would be enacted in Westminster the following day.

The royalist significance of an angel handing a crown to the prince is not hard to determine, but other potential readings emerge from our more thorough knowledge of this pageant and its locality. Our fuller understanding of the semiosis of the event suggests that the official transcripts' vision of unity was played out over the equally dramatic subscripts unfolding in the fragmented local political landscape in which this national drama was enacted.

Here recourse to *Piers Plowman* may help us to understand something of what de Certeau called the unreadable identities proliferating beneath the notice of the dominant ideologies of the City.⁸³ Langland's poem allegorizes the fixed locality, in which a phenomenal product of craft crowns the king, but it seems to me we have paid insufficient attention to its implications. If we approach Langland's allegorization of the pageant scene for its spatial phrasing within the more static perspective of the rest of the Prologue's estates portraiture, we find the poet departs from the chroniclers' role as passersby. In the lines "Thanne kam ther a Kyng; Knyghthod hym ladde" (Prol.112–3), Langland affirms the chroniclers' order of the procession as Richard arrived at the pageant tower, but departs from the itinerary-style catalogue to invoke the king's penetration *into* a fixed space. The king who "cam ther" into Chepe was a visitor, subject to the machinations of the Goldsmiths' coronation-pageant symbology, including the golden machinic symbol at the literal and figural apotheosis of the pageant tower.

Next, Langland inscribes what has been read as one of the most controversial lines in his prologue, but perhaps in the localized politics of craft we could also find an explanation for the apparently transgressive nature of the poet's assertion that the "might of the commons made him to rule." This is a widely noted crux, and the importance of the line's political impact has been assumed on the basis of its absence in subsequent manuscripts. Of course the commons do not give power to the king, but the localized professional identity-politics of the pageant scene, when a prince was crowned by the pinnacle of the Goldsmiths' craft, can help us to arrive at a fuller understanding of the events and of Langland's poem.

Langland's text parallels the scene in the chronicles, focusing upon the middle of the street in Chepe, looking at the revelatory unveiling of the thing at the center: not young Richard's youthful body below, but the machinic body above, the embodied metaphor whose actions galvanize the moment and meaning of coronation as the crown is handed down to the boy. The passing of the crown by the Angel in Chepe—the only visual aspect of the coronation the locals were likely to witness—very likely held enormous affective power for the commoners in Chepe, for they were not part of the "real" and purely regal ceremony at Westminster the following

day. The emotional power of the pageant, within its locality, instigated and perhaps constituted an alternate form of sanction by the commoners of London that was far more dependent upon the symbolic Chepeside locality than on the next day's ceremonies within Westminster.

For the commoners gathered in Chepe, the angelic statue mobilized more than itself; it moved them, transforming them into participants in an affective drama in which they witnessed the coronation, performed by this pinnacle of local craft, in their neighborhood. This thing, the automaton, temporalized and spatialized the transformation of Prince Richard into a king right *there*, at that moment, in the heart of Chepe. The automaton's crowning gesture refers forward to the distillation of kingship to be made at Westminster, and thus back to the undifferentiated state of boyhood symbolically effaced with the passing of the crown; the angel-image therefore becomes the fulcrum for the public perception of Richard's kingship. Thus the seemingly anachronistic designation of "king," coming before the angel's arrival in Langland's text, a king whose past as prince is colonized by his transformation through the angel's hand at the heart of the scene.⁸⁴

Whether or not they actively perceived St. Dunstan in the pageant, the eternity traditionally signified by the angel became directly symbolic of localized connections between the guild and the monarchy. For the sweating, drunken revelers under the affective spell of the automaton, the locus of the coronation must have shifted to the pageant, where the inception of Richard's kingship was knitted to the pinnacle of goldsmiths' craft, through the crowning gesture of the automaton's hand.

In this context, the mechanical angel reaffirmed for Londoners the ancient connections between the Crown and the Fraternal Order of St. Dunstan, a craft mystery nascent in London's mayoral politics, and yet simultaneously in the uncomfortable position of having to reassert loyalty to the Crown after having played a central role in the destabilization of city government, which in 1377 suddenly bent away from victuallers and the Crown in favor of the lesser craftsmen, all due to political agitation planned among the common craftsmen in the Goldsmiths' very Hall.

The subsequent crux in Langland's poem plays on the role of the "commons," but in the localized context provided by London's politics, geography, and civic culture, "commons" also was the political identification taken up by Fitz Hugh and Northampton to oppose the wealthier merchants and craftsmen, whose system of patronage was said to hold down "the poor commons," those denied a voice in London politics.⁸⁵ The term "commons" is repeatedly applied, both before and after the pageant, to the craftsmen at the lower end of the political spectrum, those championed by Northampton and Fitz Hugh against the hegemony of Brembre and the victuallers, as well as the guild's internal oligarchs. These

commoners formed the bulk of the audience in the streets before the pageant that summer morning. In this context, Langland's allegorical image and claim that "might of the commons made him to rule" is less an affront to the new king's prerogative than a signal of acquiescence or support, a voice for the craftsmen and commons whose stake in Richard's kingship would otherwise go unheard. Langland's text thus seems to present a unified sanction by the craftsmen in the contentious political environment of intra-guild rivalry then dominating the city: a city whose policy was soon—the next day in fact—to become subject to a king to whom a marvelous mechanical angel had handed a crown on that hot morning in Chepe.

Although scholars have read this passage and its use of "communes" as a radical claim, I feel that the retention of the angel and king in this scene of instruction, despite Langland's removal of the "miht of the commons" in the C-text, probably signals two things. On the one hand, there is the connection to the goldsmiths' need to heal the contentious atmosphere of London's mayoral- and intra-guild politics in 1377—a need made moot before Langland's later drafts with the reassertion of ward elections in the following year, and brought to a permanent end with the prosecutions of Usk and Northampton. On the other hand, there was the ongoing need to instruct the young king in the mode of "advice to princes" for which Ricardian literature is noted, and which the C-text revision still carries out.⁸⁶ As Hillier and Rooksby note:

The exercise of power through symbolic exchange (often through communication) rests on a foundation of shared belief about the relative positions of the agents involved. . . . The key to symbolic power is thus that it is a legitimating form of power which involves the consent or active complicity of both dominant and dominated actors. Dominated actors are not passive bodies to whom power is applied, but rather people who believe in both the legitimacy of the power and the legitimacy of those who wield it. (9)

The operations of symbolic power under the idea of *habitus* help to explain the social implications of the pageant, and the reasonable complicity I read in Langland's image of a king endorsed by the commons.⁸⁷ In short, while I do not know or believe that Langland had any hand in or direct knowledge of the Goldsmith's prerogatives, I feel that his street-side perspective on the Goldsmiths' pageant helps us to better understand it as a multivalent event, and a dual opportunity for the Goldsmiths to demonstrate loyalty to the Crown and to signal their place in a city whose politics they were critically interested in restabilizing. Thus in *Piers Plowman* we see shades of the Goldsmiths' assertion of fealty to the Crown, an assertion that simply lost importance as local politics shifted, Usk and Northampton lost their heads,

and Langland continued to revise his poem into the recension that we have come to call the C-text. In this context, I believe we can join Langland in imagining, however briefly, a localized civic identity with a pressing need to hand a crown to the next day's monarch.

Certainly eleven-year-old Richard's childish delight in the magnificence of his coronation is thought to have influenced deeply the young monarch's later investment—literal and figurative—in the power of courtly splendor. It is well known that Gaunt had a record of the coronation events commissioned for Richard, who apparently kept the volume close to hand.⁸⁸ The importance of the pageant in his magnificent self-imagining is confirmed in the ongoing use and even elaboration of the coronation pageant's marvelous motifs and imagery in the wondrous 1392 Reconciliation pageant, another, vaster corporate *apologia* recorded in Maidstone's *Concordia*. In between these two marvelous pageants, bracketing the career of England's first monarch to be crowned by a mechanical marvel, such manmade wonders would come to colonize some of the most well-known written work produced within the young king's affinity.

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CHAPTER 2

CHAUCEUR AND THE CULTURE OF COMMODIFIED *MIRABILIA*

*That swiche a monstre or mervaille myghte be!
It is agayns the proces of nature*

—Geoffrey Chaucer, *The Franklin's Tale*

Courtly Marvels, Scientific Approaches

The ridings and processional pageants that brought magnificent manmade wonders before substantial and varied urban audiences were initially developed in the closer confines of internal court entertainments performed among more exclusive audiences. The manmade marvels of the period developed, like elaborate pleasure gardens and other exclusive entertainments of the elite, from within the environs of the romance.

Marvelous entertainments blend the physical realities of court life with romance fictions.¹ The fact that literature could be brought to life as an engineered artistic expression reinforcing aristocratic ideals suggests that such phenomenologized *mirabilia* may have had a reciprocal effect on subsequent literary representations of marvels. In a culture that had for centuries admired marvels for their supernatural qualities, Chaucer's poetry demonstrated that the exercise of reason was crucial to the psychology of wonder accompanying the experience of marvels. Chaucer thus amplifies the traditional modes of evoking romance wonder by guiding the reader's curiosity, representing *mirabilia* at arm's length, and rendering the experience of wonder unrealizable except through the mental processes of inquiry. His representations of mechanistic, commodified, and manmade *mirabilia* helped to promote this new perspective within the romance genre and its environs.

We enjoy Chaucer's romances for the pleasing ambiguities they bring to a formulaic genre, and for the learned and wide-cast intertexts embedded in his amusing expressions. Read as part of the emerging late medieval coalition of social, doctrinal, and technological concerns that is the object of this study, his texts show evidence of the effect of manmade marvels on genre and representation. The ambiguities so pleasing to modern readers often rest squarely on Chaucer's representations of *mirabilia*. In the opening section of his *Squire's Tale*, Chaucer depicts an encounter between the people of Cambyuskan's court and the marvelous brass horse delivered into the midst of their revels. Admiring the steed's appearance, the members of this fantastic Eastern court wonder how it moves, tempering admiration of the brazen beast with inquiry (V.199–201):

But everemoore hir moste wonder was
How that it koude gon, and was of bras;
It was a fairye, as the peple semed.²

In this passage, Chaucer merges the awe inspired by the literary *mirabilia* of romance with curiosity about the mechanical marvels that were a part of late medieval court life. The text confronts the reader not only with a romance marvel but depicts this supposedly supernatural motif as an object of rational inquiry. Chaucer often appears to invite readers to experience marvels as products of human artifice rather than as supernatural phenomena. The presence of these demystified marvels mitigates the *admiratio*—the awe of the supernatural—of romance wonder in stories such as the *Squire's* and *Franklin's Tales*, substituting an interest predicated upon technical curiosity for the awe of the rare and supernatural registered in his textual sources. The courtiers' ensuing inquiries are characterized by reference to traditional authorities, but just as often reject them in favor of reasoning from natural science and skeptical philosophy.

I also suggest that they reflect the presence in Chaucer's working life of mechanical *mirabilia*, the fashionable manmade marvels of courtly entertainment. Rather than simply passing on the traditional supernatural properties of marvels in sources such as the *Squire's Tale's* brazen horse from *Meliacín* and the magic mirror from the Virgilian marvels, or the *Franklin's Tale's* illusion from *Decameron* 10.5, Chaucer rendered them as adjuncts to internal courtly play and the outward projection of courtly magnificence.

Since the thirteenth century, the courtly contexts of *mirabilia* had reinforced aristocratic ideals through the psychology of wonder associated with the rare materials and the hidden functional properties of the marvel at hand. As Daston and Park observe, "Romances served, among other things, to foster and implant aristocratic and courtly ideals and behavior. Marvels,

the aristocracy of phenomena, played a fundamental part in this project through the reciprocal relationship between those experiencing the marvel and the textual images and genre motifs from which marvels were engineered by artists.”³ This social function of *mirabilia* gradually acquired a new dimension through the self-conscious representation of these technologized marvels by authors such as Chaucer and Mandeville, who began to subject these traditionally unexamined romance motifs to inquiry within genre writing.⁴

Chaucer’s texts participated in the ongoing rationalization of marvels, opening cultural space for a developing economy of wonder in which *mirabilia* from romances were copied, made real by skilled craftsmen, for use as tokens of exchange among European nobility. During the late fourteenth- and throughout the fifteenth century, European aristocrats collected, traded, and bestowed upon one another an increasingly wild array of mechanically reproduced marvels. The importance of *mirabilia* as late medieval tokens of exchange would be realized in the early modern period through the exchange of scientific instruments as tokens that “participated in the complex system of honor and prestige that determined social identity.”⁵ Manmade marvels were the instruments that circulated in the economy of wonder developed in the thirteenth- and flourishing in the fourteenth century. Examples include Charles V’s collection of elaborate table fountains, and the mechanical tree and other automaton at Hesdin, which represent artistically crafted mechanical realizations of marvels formerly experienced only in romances such as Benoit de St. Maure’s *Roman de Troie* or Girart d’Amiens’s *Meliacin*, or in the fantastic matter of Alexander.⁶ The wonder inspired by these products of noble identity-politics was part of this exchange, for the delight of the marvel was in the experience, not in the marvel itself, as can be seen in the image from Girart d’Amiens showing courtiers experiencing the performance of an automaton (see figure 2.1). But once reproduced by the technical arts and settled in the context of courtly entertainment, these newly naturalized marvels were incapable of producing supernatural wonder, except in those ignorant of the natural mechanisms at work behind the scenes. As a newly commodified aspect of this exchange, the quality of wonder inspired by these marvels was conditioned by consciousness of the simulacrum: wonder was now being produced, manipulated, and traded to guarantee the social prerogatives of chivalric culture rather than to produce the effect of supernatural awe. By making traditional marvels in romance texts subject to a rational, corporate analysis within the genre, Chaucer contributed to an ongoing reevaluation of the social value of romance *mirabilia*. Eventually, the place of marvels would shift from the romance-inflected culture of the post-feudal elite to the milieu of gentleman collectors and early experimenters, who eventually



Figure 2.1 Automaton performing at court, MS. BN. Fr. 1455, fol. 8 (image courtesy of the Bibliothèque nationale de France)

would contain marvels alongside the less ambiguous artworks and scientific curiosities in the *Wunderkammern* of a later age.⁷

John Finlayson has recently discussed the heterogeneity of marvels in fourteenth-century romances, noting that contrary to earlier critics' assessments, evidence exists of authorial intentions to "'create' emotions such as dread and wonder, or to control the reader's response."⁸ This kind of self-consciousness in the representation of romance marvels was expanding beyond the confines of literary genre, and the implication that individual representations of marvels could be altered by authors—employed as independent objects demanding particular responses—is largely circumscribed by strictly genre-based approaches to the classification of marvels. Chaucer's literary marvels represent something new: a self-conscious reintroduction of artificial, manmade courtly *mirabilia* into romance texts, colonizing previous forms of wonder through direct re-presentation of familiar *mirabilia*. Chaucer's access to and interest in romance, technology, and his understanding of the implications of skeptical thinking conditioned his poetic expressions of the intellectual climate surrounding *mirabilia*, which intersected with late medieval court culture in the phenomena of manmade marvels.

For example, the "lewed folk" in the *Squire's Tale* analyze and naturalize *mirabilia* by adding weather phenomena such as thunder and mist to the list of traditional romance marvels, bridging secular and philosophical approaches to the experience and psychology of wonder, much in the

manner of contemporary quodlibetal debates. The claims such representations lay against traditional romance *mirabilia* indicate the importance of isolating for examination distinct treatments of traditional marvels reproduced in genre contexts, so that authorial emphases may be revealed that are otherwise obscured by the traditional critical practice of treating marvels as a class of generic objects.⁹ Too often a generalized and insufficient critical idea of medieval wonder eclipses the self-consciousness with which authors such as Chaucer display courtly marvels and responses to *mirabilia* within genre texts.¹⁰

Manmade devices and illusions required great technical ability to produce, but the quality of wonder one experienced was contingent upon the viewer's perspective. For those—like courtiers—ignorant of the works behind a particular marvel, the experience of wonder was probably different from that imbued in knowledgeable viewers such as the craftspeople who produced them. Chaucer's practice of encompassing both the technical and experiential sides of *mirabilia* in romances such as the *Franklin's* and *Squire's* tales shows his preference for addressing the ontological status of rationalized, mechanized marvels within his fictions, where his representation of this dual approach to marvels is submerged within the series of narratorial voices. Through the medium of his approach to *mirabilia*, we may glimpse an altogether overlooked aspect of Chaucer's modernism, one tied by the bonds of conservative, "fideistic" thinking, while aware of the possibilities inherent in "newe thinges" and self-consciously vexed by his position in a social milieu in which men could create *mirabilia*.

While European court culture throve upon technical *mirabilia*, the church took an ambivalent role that nevertheless may have contributed to Chaucer's rationalization of wonder. Chaucer approaches romance marvels with a literary ambivalence suggestive of—though by no means practicing within—the contemporary philosophical skepticism about unknown phenomena. Like philosophers from Oresme to Holcot (to make an odd pair), although Chaucer moves formerly supernatural marvels into the realm of the rational, he preserves the plausibility of divine prerogatives. By the mid-fourteenth century, in explanations of apparently supernatural phenomena, *ratio* was attributing all but divine intervention to natural causes, although thinkers such as Adelard of Bath and William of Conches maintained astronomical causality. William of Auvergne and Nicole Oresme typify the skeptical, rigidly naturalistic attitude brought to bear specifically on *mirabilia*.¹¹ Oresme in *De causis mirabilium* contended that people only marvel at phenomena that they do not understand. He attributed the traditional psychology of supernatural wonder to only two causes: unnoticed changes in purely natural phenomena, and faulty or deceived human perception.¹²

This widespread attitude explicitly ties the experience of wonder associated with *mirabilia* to the degree of knowledge possessed about a particular marvel, for scholars of this period were distinctly concerned about disabusing humanity of any notion that *mirabilia* had supernatural origins.¹³ The works of skeptical theologians such as the Oxford Dominican and Cambridge lecturer Robert Holcot, whose somatic explanation for the meaninglessness of dreams underlies Pertelote's scientific reasoning in the *Nun's Priest's Tale*, partake of this cultural shift toward rationalization of the experience of unknown phenomena, including wonder. As we shall see, Chaucer's representations demonstrate his awareness of the contemporary machinations of *mirabilia*.

The church could judge secular uses of *mirabilia* harshly, for example in the *Nuremberg Chronicle*, where manmade marvels are condemned as idolatrous, and charges of idolatry gave mechanical marvels a negative valence throughout the period.¹⁴ However, churches in France and England were among the earliest structures to house clockworks adorned with marvelous *automata*. Some of the most famous European technical marvels, including the automaton ornamenting city clocks and the great mechanical cock beating its wings atop Strasbourg cathedral, were sanctioned by the church. Further, England itself was a leader in the early adoption of clockworks. Fourteenth-century clocks are recorded in old St. Pauls, as well as at Exeter, Norwich, St. Albans, Ottery St. Mary, Wells, and Wimborne, many of which employed automaton such as those on the timepiece at Glastonbury, "a great clock distinguished by processions and spectacles."¹⁵ The dual approach to the display of mechanized marvels in the church was paralleled by a gradual rationalization of marvels among English and continental theologians such as Hugh of St. Victor, William of Auvergne, Jean Buridan, and Robert Kilwardby, who naturalized causality, bringing rational inquiry to bear on unexplained phenomena.

Perhaps due to their ambivalent status, *mirabilia* are treated by Chaucer as physical phenomena of uncertain ontological status and dubious provenance, often bound to his aging world by nothing more substantial than mirth and irony, and often explained away through rationalistic analysis. This conflict may seem a curious claim for a writer whose alchemical and astrological treatises inform most critics' understanding of his technical proclivities; Chaucer's *Treatise on the Astrolabe* and the willingness of critics to attribute to him authorship of the *Equatorie of the Planetis* speak to his acute interest in the sciences.¹⁶ However, Chaucer's experience with technology was far wider than these writings reveal. His technical writing is not innovative or unusual for the period, and is more important as a marker of translation practices and the transmission of ideas than as a scientific achievement.¹⁷ Rather, Chaucer's technical proclivities relating directly to manmade *mirabilia*

probably developed during his work as a lowly adjunct to the courts of Edward and especially Richard II. Specifically, Chaucer's knowledge of technical *mirabilia* probably came from reports of and participation in some of the greatest performances of manmade *mirabilia* in the courts of France, Italy, and England itself. In the tightly controlled narrative locus of his poetic imagination, Chaucer breaks the barriers of traditional form, moving beyond the constraints of technical writing and the romance *genre* by employing romance to address some of the greater moral issues underlying his knowledge of the uses to which technology could be put in service of magnificent identity projection.

Chaucer's representations of rationalized *mirabilia* appear to merge moral concerns raised by the nature of technology with his understanding of technological artifice. Chaucer's representations of *mirabilia* suggest he was caught between technology's positive aspects and the moral decline that unspiritual innovation could suggest. The irony of his disenchanted wonders is a strategy for coming to terms with the moral danger of technology. On the one hand, he expresses the tacitly enthusiastic approval of technology and science that allowed him to traffic with scientists at Oxford; through his associations there and at court he produced the first treatises on astronomy and alchemy in English. On the other hand, he registers apprehension or anxiety about modern *techne* through the worldly decline associated with technology in poems such as *The Former Age* and in the ironically humorous scholastic fart-machine imagined at the end of the *Summoner's Tale*.¹⁸ Later, I look at what more learned approaches to *techne* reveal about Chaucer's attitudes toward manmade marvels; but for the time being, the romance-based locus of the poet's comic and deceptive marvels will show us more about what Chaucer thought of the economy of marvels in which they were deployed.

Using romance marvels and a near-parodic verse form in a highly self-conscious burlesque of romance literary and social mores, Chaucer archly portrayed the confrontation between a rather sorry knight-errant and the three-headed giant lurking in the herb garden of the *Tale of Sir Thopas*.¹⁹ The comic romance giant of *Sir Thopas* as well as mechanical marvels such as "diverse apparences / Swiche as thise subtile tregetoures pleye" (FrT.V.1140–1) and the fantastic flying brass horse of the *Squire's Tale* appear ironically or as objects of examination subject to the demythologizing mechanisms of scholastic inquiry.

If we are to suppose that Chaucer was a particularly astute observer of his culture, his detailed and inquiring representations of these mechanical wonders of courtly life must be examined—the marvels treated as objects of his interest and not simply as markers of some abstract notion of wonder or deceit in his texts. Critics often note the perspective this social position

provided, and the textual and perhaps broader exposure to courtly marvels, together with the middle-class origins that placed him among, but never fully within, London's highly stratified social scene, afforded him a unique opportunity to monitor the emergence of this inquiring form of wonder in its parallel contexts of courtly prerogatives, elite craft production, religious disapproval of *curiositas*, and the scholastic insistence on natural cause. Chaucer's characters run the gamut of these perspectives, remembering courtly performances of *mirabilia*, buying and selling marvelous performances, and most important, inquiring into the hidden functions of marvels. These images conflate the supernatural *mirabilia* of traditional romances with inquiring philosophical practices, emergent *techne*, and associated psychological expectations of courtly entertainment. In his images I find hints of the developing economy of wonder, in which the experience of marvels was modified by *curiositas* instead of *admiratio*, and was perceived as transactional rather than supernatural.

Chaucer's narrative depictions of marvels are the product of a lifetime spent in service to the Crown, and his literary response to marvels is conditioned by this extensive textual and experiential background as traveler, bureaucrat, writer, and scholar. Chaucer displayed an intellectual flexibility that allowed him to function in fluid ambassadorial roles, crossing boundaries of class, language, and nation in service of Richard II. In his capacities as a member of the royal household and as a *de facto* ambassadorial adjunct to the French and Italians in the 1370s and 1380s, he was often in proximity to famous clockworks, *automata*, illusionistic contrivances, and possibly even the courtly wonders they animated. Such experiences, garnered through his domestic and foreign appointments, may explain his predisposition to temper literary depictions of *mirabilia* with notions of technological artifice.

Whether developed from exposure to courtly *mirabilia*, advanced scientific instrumentation, or rationalizing theological tendencies, Chaucer's poetry often shows an inclination to rationalize—even commodify—marvels in romance-based texts. When his flexibility was brought to bear on the problems presented by textual romance marvels, Chaucer's poetry reveals a vexed approach to *mirabilia* in works such as the *Franklin's Tale*, the *Summoner's Tale*, and especially the *Squire's Tale*, wherein his imagery may offer glimpses of a life spent among the technological wonders of the age.

Reading *Mirabilia* as Courtly Pastime

Chaucer's travels in Europe exposed him to the artificially realized marvels of his time. Mechanical marvels were part of the political economy of Europe, being traded among social elites, given as gifts to curry favor, and

used for embassies and as entertainments throughout the fourteenth century. Collections of clockworks, *automata*, table-fountains and similar devices are listed in French, Flemish, and Burgundian inventories. These marvels began to appear in the literature in various ways, as Christine de Pizan reminded readers of Charles V's awesome collection of fountain *automata*, and Froissart wrote the *Orloge amareuse*, playing on the clock as a metaphor for romantic love.²⁰

Chaucer read about the *automata*, gardens, and other marvels of the French castle Hesdin—a prominent example among the many cultural centers Chaucer may have identified with these mechanical phenomena—in Guillaume de Machaut's *Remede de Fortune*, as he used this poem to compose *The Book of the Duchess*. The marvels within the garden surpassed the writer's descriptive powers, although his *occupatio* offers a detailed catalogue of Hesdin's *mirabilia* (806–17):

Si m'en alai parmi le brueul
 Qui estoit si biaux qu'onqueiz mais
 Ne vi, ne ne verray jamais
 Si bel, si gent, si agreable,
 So plaisant, ne si delitable.
 Et les merveilles, les deduis,
 Les ars, les engins, les conduis,
 Les esbas, les estranges choses
 Qui estoient dedens encloses,
 Ne saroie jamais descrire.

I walked along among the plantings, which were more beautiful than any I'd ever seen, nor will I ever see any so beautiful, so fair, so agreeable, so pleasing, or so delightful. And I could never describe the marvels, the delights, the artifices, the *automata*, the watercourses, the entertainments, the wondrous things that were enclosed within.²¹

Here the rhetoric of deferred knowledge and enclosure invites the mixture of opulent entertainment, wonder, and curiosity Chaucer would later use to characterize Cambyuskan's courtiers in the marvels of the *Squire's Tale*, wherein, the observers' understanding of mechanical *mirabilia* is contingent upon their relative knowledge of how the mechanical marvel works.

Although descriptions of Hesdin's *mirabilia* circulated in England, Chaucer may have heard more of these and similar marvels while abroad. The premier locale for late medieval French courtly amusement, Hesdin lay near Artois, a few miles upriver on the Canche from Montreuil-sur-mer, where during 1376 and 1377 Chaucer traveled on the king's business. It has been suggested that as a regional highlight the marvels of Hesdin would

have been brought to the attention of travelers of rank or official office.²² Famous throughout northern Europe for its gardens and courtly amusements, castle Hesdin had by the 1370s enjoyed its status as the pinnacle of French courtly culture for nearly one hundred years, and was visited frequently since it stood between Calais and Paris.²³ When he traveled to Montreuil or Amiens, accompanied any of the English royal household who passed through Artois in transit to Paris, or even when attached to Gaunt's 1369 parley with the French at Artois itself, Chaucer could have heard more detailed descriptions of the mechanical animals, human *automata*, and other *engins de esbattement* installed for the diversion of European nobility gathered at Hesdin among the earthly delights of its gardens.²⁴

Those visiting its grounds were entertained according to the Gothic fashion for *mirabilia*. Their sense of wonder was sparked by moving mechanized animals, optical illusions played with mirrors, speeches given by mechanical human figures, and other illusions produced through the subtleties of the legion of craftsmen and artisans required to fashion such marvels. The exact nature of Hesdin's *mirabilia* is inferred not only from Machaut's poetry but from account books of the period 1299 through the 1430s, which list purchases of new badger-fur for the mechanical monkeys, repair and painting of an elephant and goat, maintenance on the automated boars' heads in the Great Hall, the purchase of a marvelous mirror in which diverse marvels were witnessed, construction of a carved hermit that spoke to visitors and another figure that proclaimed to guests on behalf of the king, and triennial plumbing for hydraulics fed by pumps in the river Canche's marshes below the castle. There was even a mechanical tree with songbirds and fountains mounted on a *gloriette*, reproduced from Alexandrine romance and exhibiting affinities with both the *automata* of contemporary table-fountains and the fabled mechanical silver tree built for Guillaume de Boucher for Mangu Khan.²⁵ Despite occasional setbacks such as the burning of the pavilion and its marvels by English *chevauchiers* in 1355, the installations of the castle functioned throughout the period, as attested by the account books and a description of the experience of these marvels recorded by the Duke of Burgundy in 1432.²⁶

Hesdin's centrality in the European idea of artificial marvels is indicative of the way this new phenomenon of wonder was replacing supernatural contingency with the motives of court life and the projection of noble identity. The *mirabilia* constructed for the entertainment of French courts reinforced the prerogatives of an elite culture whose desire for amusement had centered on romance texts until, in the fourteenth century, technological innovations allowed them to begin reenacting even the traditionally supernatural themes of romance in their elaborate halls and pleasure gardens. Scholars have long emphasized the presence of *automata* and the

growing manmade marvels in the courts of later medieval Europe, and Hesdin featured these entertainments on a magnitude unparalleled in the period. But casual discussion or more direct knowledge of installations such as those at Hesdin, Anjou, or in possession of Charles V would account for only some of the many venues through which Chaucer may have been exposed to the artifice of the period's manmade wonders.

In addition to such installations of *mirabilia*, Chaucer may have been familiar with less permanent but no less technically astounding marvels performed at occasional entertainments. As the contemporary fashion for mechanical marvels grew and spread, taking technical developments such as clockworks and hydraulic engines northwest on the currents of matrimonial retinues and with waves of returning crusaders, these entertainments became lavish technical wonders, cultural events described in chronicles and illuminated manuscripts.

Loomis documents such a performance of marvels, occasioned as part of the fabulous entertainments performed in honor of Emperor Charles IV at the Palais de la Cité in the Winter of 1378.²⁷ The hundreds of celebrants witnessed in the hall a marvelous reenactment of the vanquishing of Jerusalem in 1099, brought to life by the artifice of hidden contrivances operated by *tregetours* or *artisans mécaniques*. The *Chronique de Charles V* records in some detail the events of the night of January 6. On this evening, elaborate scenes depicting the crusade were enacted and a life-sized boat appeared to tread upon water, moving up and down the hall. The display culminated in a siege complete with armed Saracens climbing ladders up the walls of a wondrous Jerusalem Tower made to appear in the hall. When the performance was over, these marvels were whisked away. Loomis suggests a parallel between the events described in the *Chronique* and Chaucer's description of a similar performance of marvels in the *Franklin's Tale*, wherein the marvelous spectacle of a boat and castle was "voyded anon." Although there is no evidence to suggest Chaucer was an actual witness among the hundreds of unrecorded guests, he was an acquaintance of recorded attendees such as Guichard d'Angle, who earned his way as Richard II's training master in the 1370s.²⁸ A famous illumination depicting this event arranged for King Charles and the emperor foregrounds the special effects of the boat and castle.²⁹ Clearly the spectacle of the marvelous boat and castle engaged the imagination of the court and its affinity, as is evident in the subsequent depiction of the marvels in the text and image (see figure 2.2).

The significance of this image is in the depiction of the rulers; the marvelous boat floating down the hall, the artificial sea, and the appearance of the castle are part of a performance marshaled to magnify the splendor of the overall event. These marvels are clearly performances for the entertainment

by Froissart's account of a similar performance of like marvels among the French court's revelries on the evening of June 21, 1389.³⁰

The romance marvels made real at Hesdin, the Palais de la Cité, and many other locales throughout Europe were expressions of elite social interactions in which the romance-based psychology of wonder, formerly characterized by awe of the supernatural, was employed as a commodifiable marker of chivalric identity, the token of exchange circulating among the economy of wonder. The ubiquity of such marvels grew as the technologies animating them became more widespread; these technologies emerged from scientific traditions brought north from the middle east, and often merged with the scientific traditions of the north, particularly in the production of astronomical instruments. Roger Bacon himself had dispelled the idea that they might be anything other than manmade illusions over a hundred years before Chaucer's time.³¹

Because so few of the marvels persist as artifacts or in records, evidence of Chaucer's experiences with the better-known courtly *mirabilia* of his time remain circumstantial. His scientific background, however, helps to establish his knowledge of a great many contemporary marvels of a more scientific nature. While such technical marvels do not constitute performances of marvels in the romance sense, they nevertheless had a similar function regarding wonder and court prestige, and contribute to the mechanistic sensibility Chaucer brings to his analytical representations of *mirabilia*.

During his 1372 trading embassy to Genoa and Florence, Chaucer encountered many architectural and engineering advances.³² His subsequent movements during the latter part of the decade through Lombardy to Milan included viewing the great astronomical clock of Jacopo di Dondi, the pride of Padua. Chaucer was engaged for several weeks during the summer of 1378 in an embassy to Bernabò Visconti, who was seeking an English matrimonial alliance through negotiations for his daughter Caterina. Chaucer's stay coincides with the attendance of the great doctor and astronomer Giovanni di Dondi, the famous builder of the superlative technical marvel of the period, the grand *astrarium*. Built ca. 1365, the Astrarium by 1381 was scheduled for installation in Duke Gian Galeazzo Visconti's library: a superlative collection developed for the family by Francesco Petrarch, and in which he had studied.³³ Di Dondi's device had achieved great renown, and was considered one of the marvels of the age. Phillipe de Mézières described it as being made "so subtly that in spite of the multitude of wheels, which could not be numbered accurately without dismantling the instrument, the entire movement of which [is] such a great marvel that the solemn astronomers come from far regions to see [it] in great reverence." A letter of July 11, 1388 describes the perspectival quality of the wonder inspired by this mechanical marvel, which still operated,

“causing no small wonder to the ignorant and great delight to those who understood it.”³⁴

Such scientific mechanical marvels were discernibly a part of the field of fine mechanics operating behind the more illusionistic marvels of courtly culture. As a writer of treatises on science affiliated with the astronomers of Oxford, Chaucer probably noted that such scientific instruments shared technical characteristics—such as clockworks, hydraulics, and hidden mechanisms—with the more artistic *automata* of courtly entertainments. Significantly, in much of Europe, clockworks were more often used to power *automata* than to keep time.³⁵

Chaucer’s mechanical interests also could have been sparked by technical advances in England, for English engineering, clockworks, and *automata* rivaled even Italian technology. Chaucer’s domestic appointments as Clerk of the Works and later as Commissioner of Walls and Ditches underscore the pervasiveness of his technical inclinations, complementing the architectural interests expressed, for example, in the *House of Fame*.³⁶ Chaucer’s business with the Genovese as Controller of the Port of London probably exposed him to a clockwork marvel near their trading post at Portsmouth; during official excursions or on his own, he may have diverted to visit the great astronomical clock at Salisbury Cathedral. From his connections to Merton College, Oxford, we might also infer that this translator of Boethius and writer of the first English tract on astronomy would have been familiar with the greatest astronomical marvel of fourteenth-century England, Wallingford’s celestial clock at St. Albans, which was completed with the addition of a mechanical “wheel of fortune” and various *automata* during Thomas de la Mare’s abbacy (1349–96).³⁷

These devices that combined scientific instrumentation with marvelous automata blur the distinction between technical instruments and artificial courtly *mirabilia*. The magnitude of Hesdin’s collection of *automata* and the cultural importance of the performances at the Palais de la Cité offer some specific insight into the popularity, ideological uses, and especially the reception of marvels in Chaucer’s secular culture, and the presence of such marvels among church paraphernalia reinforces the use of similar marvels to effect religious awe. Courtiers experiencing such marvels were fully cognizant of the worldly nature of these diversions, finding them entertaining and wonder-making, but certainly not magical in the preternatural sense. Craftsmen and those familiar with the instrumentation behind these textual marvels-made-real no doubt found them less than inspiring of even the simulacrum of romance wonder they were built to convey. Whether such *mirabilia* found their origins in romances or were constructed as physical expressions of moral doctrine, these contrivances would have been recognized and confronted as reproductions within their socially circumscribed

contexts. Medieval “readers” of technological marvels were fully aware that they operated on obscured principles of mechanics. Chaucer’s representations of *mirabilia* may simply elaborate on contemporaneous ideas of wonder by representing characters who were cognizant that their wonder was merely a simulacrum of the literary effect of wonder produced in romances, or the awe of the divine.

Trade in Marvels in the *Franklin’s Tale*

An example of this rationalizing practice is found in the *Franklin’s Tale*, in which the memory, procurement, and performance of marvels become destabilizing forces within this traditional romance narrative. By temporarily subsuming the focus on *gentillesse* in the traditional romance into a narrative meditation on the nature of marvels, Chaucer reorients the perspective toward a critical analysis of *mirabilia*. During the course of the tale, Aurelius and his brother’s reactions to *mirabilia* seem to indicate that marvels made subject to commodification and trade lose their mystery and become mundane objects of curiosity.

The *Franklin’s Tale* initially establishes the introduction of marvels to the story through the image of an earthly paradise, the site of man’s idolatrous transgression against the divine creator.³⁸ Once the traditional “rash promise” motif is established, Dorigen’s friends attempt to console her by moving her from one entertaining venue to the next, until they hit upon the perfect site wherein romance motifs and church doctrine are evoked simultaneously in the *Hortus conclusus* (V.906–12):

And this was on the sixte morwe of May,
Which May hadde peynted with his softe shoures
This gardyn ful of leves and floures;
And craft of mannes hand so curiously
Arrayed hadde this gardyn, trewely,
That nevere was ther gardyn of swich prys
But if it were the verray paradise.

In this earthly paradise wrought by man’s craft—analogous to the pleasure-parks of noble disport—a deceptive young squire becomes Dorigen’s romance lover. His suffering precipitates a subsequent narrative dominated by the marvelous tricks and “appearances” surrounding the practice of “magyk natureel” (V.1125). The motif of the garden carries connotations of the Fall; this young tempter, who ultimately will undermine the young lady by arranging the performance of a marvel, ties original sin to the marvelous “appearances” performed through the

clerk's natural magic. That it is precipitated in a garden crafted "of mannes hand so curiously" (909) suggests the transgressive creative impulses of man in the production of marvels, presumptuously improving upon creation, or even usurping the prerogatives of the creator, recalling also that the contents of such gardens often included artificial reproductions of romance motifs.

Chaucer's emphasis on the secondary theme of *mirabilia* nearly usurps the *gentillesse* theme usually assumed to underlie the narrative. In his excellent discussion of the household economies of the *Franklin's Tale*, Smith comes closest to noting the domestication and transitional role of *mirabilia* we have observed through the tale, noting that Chaucer's tale "suggests in several ways that the social world is an almost literal machinery of illusions."³⁹ Within the romance frame provided by the story of Dorigen and Arveragus, the generic motif of marvels eclipses the arc of traditional versions of the story, in which magic plays a very minor role, merely backgrounding the main theme of *gentillesse*.⁴⁰ From the appearance of Aurelius in the garden until the resolution of the bargain, the romance tale is dominated by a detailed account of the production, execution, and even mercantilization of marvels. The discrepancy in Chaucer's emphasis is perhaps explained through the broader experience of *mirabilia* I have alluded to earlier, a notion reinforced by his description of the brother's experience of marvels (V.1139–51):

For I am siker that ther be sciences
By whiche men make diverse apparences,
Swiche as thise subtile tregetoures pleye.
For ofte at feestes have I wel herd seye
That tregetours withinne an halle large
Have maad come in a water and a barge,
And in the halle rowen up and down.
Sometyme hath semed come a grym leoun;
And sometyme floures sprynge as in a mede;
Sometyme a vine, and grapes white and rede;
Sometyme a castel, al of lyme and stoon;
And when hym lyked, voyded it anon.
Thus semed it to every mannes sighte.

Even those who do not support Loomis's contention that this description parallels exactly Chaucer's own experience, the presence of his compatriots, and the broader European context of marvelous courtly entertainment, suggests that at the very least an analysis of Chaucer's expansive and concentrated attention to the manmade marvels of this tale is warranted. Even if the specific image recorded in the *Grand*

Chroniques does not provide Chaucer's model, other courtly wonders approximate it as well; an inventory of Louis d'Anjou's treasures from 1379 to 1380 records a great silver, enamel, and golden *nef* of a sea-bound ship that ran on wheels, populated with tiny, realistic sailors, trumpeters, and other figures.⁴¹

Not content to merely rehearse the appearance of such marvels in the Franklin's romance, Chaucer extends his treatment into a lengthy digression during which a suitably learned clerk is found, a bargain is struck, and not one but several marvels are performed in exchange for contracted remuneration. This emphasis on the trade in *mirabilia* diverts narrative focus toward the motif of *mirabilia* to a greater extent than in any analog, such as *Decameron* 10.5, from which Chaucer may have borrowed.

Chaucer, astrological enthusiast and technical writer, takes great pains to portray the financial rationale and means of execution of the marvels performed on young Aurelius's behalf. Heightened attention to the moral gravity of *mirabilia* is compounded by the recounted performance of marvels put into the mouth of Aurelius's brother. This character's considerable narrative agency resonates with Chaucer's position as a man aware of what lies behind marvels. In Chaucer's story, marvels are commodified during the introduction of the clerk, used as part of his "sales pitch," and finally performed as the initial part of the ultimately failed transaction. Throughout, Chaucer details the astronomical and astrological mechanics that allow man to control nature.⁴² In this he displays concern with the nature of secular marvels such as those explained by Oresme and William of Auvergne, which lies in the growing distinction in the fourteenth century between natural and demonic magic. It was not uncommon during this period for clerks to collect works on the former while eschewing those treating demonic magic, indicating gradations of moral value in the very nature of the performance of marvels. Many collectors of magic texts, for example, maintained a distinction between texts of explicit religiosity and those displaying interest in "the theoretical and scientific image of magic. . . and current issues in natural philosophy."⁴³ By maintaining an allegiance with the natural based in contemporary theology and science, and by avoiding connotations of the demonic in this extension of the romance marvel theme, Chaucer effectively licenses his own delight in the worldly marvels he rehearses for the tale, while simultaneously opening them up for investigation within the controlled space of his narrative.

Aurelius's brother's recollection is the first indication of marvels in the story, precipitating a sequence of like performances. In representing these marvels, Chaucer eschews traditional expressions of the wonder evoked by marvels to express these performances in a decidedly mundane mercantile

form. The clerk obtains the attention of the brothers with one trick, only to perform another as a means of showing his wares. These illusions, performed in the clerk's home as "apparences" representing idealized aristocratic activities such as hunting, gaming, and dancing, are proffered and then vanish with a clap of his hands (V.1195–204):

He saugh, when voyded were thise wilde deer,
 Thise fauconers upon a fair ryver,
 That with hir haukes han the heron slayn.
 Tho saugh he knyghtes justing in a playn,
 And after this he dide hym swich plesaunce
 That he hym shewed his lady on a daunce,
 On which hymself he daunced, as hym thoughte.
 And whan this maister that this magyk wroughte
 Saugh it was tyme, he clapte his handes two,
 And farewell! Al oure revel was ago.

The aristocratic imagery of the clerk's marvelous "apparence" forges a link between the *mirabilia* of courtly culture and the mercantile circumstances of the poem, accurately reflecting the cultural affiliations of commodified *mirabilia*. That this romance presents the marketing and exchange of marvels without comment or moral coloring would seem to imply that to the *cognoscenti* the marvel was no more supernatural than the manner of its exchange.

Repetition of verbal emphasis in a later passage on the clerk's books further implicates Chaucer's perspective in the commodification of the natural source of these artificial, aristocratic marvels. The narrator relates that the three bargained "in his studie, ther as his bookes be" (V.1207) and repeats this formula in line 1214 to emphasize to the reader the clerk's immersion in the sciences rather than in demonology at Orleans, a well-known scholastic center. This emphasis on technical learning is typical of Chaucer's clerks, for whom "out of olde books, in good feith, cometh al this newe science that men have" (PF.22–5). The Franklin's "philosopher" (V.1561) is thus obliquely exonerated as a practitioner of natural magic; he is a producer and seller of marvels licensed for enjoyment, if not wholly without the moral coloring implied earlier in the tale by the deceptions in the garden.

We witness only one other perspective on the final marvel of the *Franklin's Tale*—the removal of the rocks—which serves effectively to demonstrate Chaucer's interest in emphasizing multiple perspectives on *mirabilia* to elucidate the means behind the naturalized marvels in his romance texts. Dorigen, through her ignorance of the brothers' bargain with the mercantile clerk, is astonished at a marvel for which the brothers, narrator, and reader have ample understanding of cause. Her exclamation

embodies the notion that perspectives on the quality of manmade marvels are located in the degree of knowing (V.1344–5):

That swiche a monstre or mervaille myghte be!
It is agayns the proces of nature

This is the only time in Chaucer's story that a marvel is attributed to supernatural causes, and the significance of the Augustinian echo in her insistence that it is a "monstre," or demonstration of supernatural efficacy, would not be lost of Chaucer's contemporaries, an audience primed to understand the difference between things built to deceive and things that operate contrary to the processes of nature.

Dorigen's dismay is in marked contrast to everyone else in the scene. The men are portrayed according to the knowledge they possess through the transactional properties of *mirabilia*. They are perfectly aware of the origin of this marvel. Further, Chaucer has been at pains to depict this apparent violation of "the proces of nature" as a token of exchange in a romance love-game, the performance of which was apparently subject only to market value and a scientific approach to harnessing the forces of nature in service of "apparences / Swiche as thise subtile tregetoures pleye."

Aurelius's and his brother's perspective on the marvel's cause informs and alters their sense of wonder, making the marvel a mundane thing subject to everyday economic realities—probably due to Chaucer's awareness of the differing experience of wonder encountered by courtiers and those who produce and direct marvels for courtly entertainment. Here the fantasy of aristocratic franchise that Vance Smith eloquently derives from Chaucer's text is layered with references to the kinds of display that guarantee franchise while avoiding the grubby exchange of monetary wealth, which nevertheless returns through our knowledge of the perspectives engaged in this economy. The display of marvels that is part of this realm of mutual regard is idealized by the text as the site of aristocratic exchange; the disquieting presence of the marvel here serves as a guarantee of chivalric identity without the constraints of unseemly accumulation, but only if perspective allows the marvel to sustain its tenuous claims to be other than the product of quotidian lucre. The attention Arveragus pays the "logic of spectacle and display" (43) as a guarantee of social degree mirrors the social praxis of courtly *mirabilia* Chaucer mines from his own experience to salt the tale with wonders.

As will become clear in the subsequent discussion of marvels in the *Squire's Tale*, only characters who do not know the cause of marvels display wonder or *admiratio* in the traditional romance sense of awe of the supernatural; most courtiers quickly forego wonder for *curiositas* or *cupiditas*, much like the artificial marvel collectors—the dukes of Burgundy and Italy

and the king of England among them—in the upper echelons of the fourteenth-century courtly milieu.

Reading Courtly Marvels in the *Squire's Tale*

In the *Franklin's Tale* Chaucer's inquiry into marvels is legitimized by naturalizing secular *mirabilia* through a mercantile model, undercutting the qualities of wonder that the reader of an older, more traditional romance might have otherwise experienced. In the *Squire's Tale*, Chaucer employs romance as a vehicle for the analysis of marvels, focusing his narrative on the courtiers' reading of the tale's marvels, in an innovative portrayal of inquiry into courtly *mirabilia*. Borrowing his marvelous imagery from earlier romances such as the late thirteenth-century *Cleomadès*, the *Meliacin*, and the tales of the Virgil legend, Chaucer uses the first segment of his romance to examine the marvels themselves.⁴⁴ In his tale, a stranger-knight rides into the fabulous eastern court of Cambyuskan, or Ghengis Khan, bearing apparently magical gifts that draw the interest of the Khan's courtiers. One is reminded of Mughal Khan's visit to the court of Paris in the 1250s, where he witnessed *automata* assembled for his entertainment, but Chaucer seems to be playing with more direct textual resources for his marvel-imagery.

Mirabilia are the focus of a frame narrative to which the tale of Canacee is appended and eventually cut short by the Franklin. The Squire shapes his tale through rhetorical *occupatio*, effectively framing the narrative of Cambyuskan's fabulous Eastern court into a nuanced authorial study of the reception of marvels in a romance court setting, by focusing his narrative on a series of discussions and evaluations of the marvels themselves. At first there appears nothing unique about the steed of brass, the Virgilian mirror, the ring, and the sword, all of which have lengthy genealogies in the textual history of romance genre wonders. Chaucer's tale was long respected as a typically eclectic romance, and the marvelous items he portrays all have analogues elsewhere, many in romances we suppose him to have heard.⁴⁵

In no related source or analogue for the *Squire's Tale* are the marvels subjected to an empirical analysis by characters in the story. Only Chaucer, inquiring after the hidden mechanisms behind the formerly magical marvels of the romance genre, so thoroughly blurs the line between textual romance and courtly experience by representing *mirabilia* under direct scrutiny. In the context of its analogues Chaucer's romance does not at first appear unique, but where Chaucer's tale and its catalogue of *mirabilia* show a remarkable innovation is in his representation of the courtiers' practice of "reading" these marvels. These courtly readers reference traditional authorities, for example, in equating the brass horse with Sinon's Trojan

Horse, but then supplement this historical analysis with a proto-scientific inquiry in which natural causes are sought for the traditionally magical properties of each marvel, for example, reading the Virgilian mirror as the mundane product of “anglis and of slye reflexiouns” (l.230).

Chaucer’s rendering of the *Squire’s Tale*’s marvels in a courtly social context suggests an awareness of or access to the experience of manmade *mirabilia* then popular among European courts from London to Italy. Chaucer’s tale represents the crowd in Cambyuskan’s court subjecting these traditional romance marvels to a distinctly empirical inquiry into their cause. The portrayal of this form of inquiry speaks to the range of Chaucer’s understanding of *mirabilia*, encompassing not only the aristocratic view of these marvels as objects of wonderment, but also a more skeptical mechanistic view from the sciences and from the crafts-classes who would have produced the mechanisms behind entertaining courtly marvels.

It is with the steed of brass that Chaucer and his Squire are both particularly concerned. Over a third of the tale’s 346-line first section is devoted to the brazen horse; its workings are the dominant interest of the people in Cambyuskan’s court, and it is also the sole item about which the khan himself ventures to observe and inquire. Chaucer departs from his sources to have his text encompass the perspectives of author, courtiers, stranger-knight, and khan, providing a clear example of inquiry into the workings of a marvel as a form of courtly pastime.

When the knight first explains his gifts, he restricts his discourse on most of the marvels to their properties, the things they can do for the bearer; for the steed of brass; however, he elucidates both the manner of its control and of its construction. This steed later proves most challenging to the “lewed” crowd. The brazen horse is to be actively controlled by the turning of several pins, each of which produces a different physical operation; otherwise it remains passive, “stant as it were to the ground yglewed.” Like the mechanical marvels of the Palais de la Cité or those mentioned in the *Franklin’s Tale*, it will not be “voided” except by those with an understanding of its mechanism. Here Chaucer describes the creator of the marvel, who had to master the natural sciences, as well as “ful many a gyn” or clever contrivance, mechanism, or deceitful plan (V.128–31):

He that it wroughte koude ful many a gyn.
 He wayted many a constellacion
 Er he had doon this operacion,
 And knew ful many a seel and many a bond.

Gyn, etymological cousin of the Latin *engin*, during this period carried a number of denotations related to deceptive tactics and to the concealment

of motivating factors, both conceptual and mechanistic. That the maker was a man undertaking astronomical calculations and technical crafts only underlines the mechanistic character of Chaucer's depiction. Here Chaucer's tale becomes problematic as a generic romance, for the *mirabilia* are undone through parallel depictions of technical construction, means of operation, and inquiries into cause—clearly Chaucer has carried these marvels far from their source texts.⁴⁶

The gifts are then carried away, with the exception of the steed of brass, which cannot be moved because the simple windlass and pulley mechanism used by the khan's men cannot budge a superior device for which they "kan nat the craft": here Chaucer explicitly contrasts simple and fine mechanical devices. Despite the knight's disclosures about the mechanism, the device retains its status as a marvel to the court audience, who are not informed about how it works. The court begins to "diversely deem" or engage in the unique pattern of investigative behavior that they will apply to each of these literary marvels in turn, proposing natural causes and arguments to support their suppositions (V.199–211):

But evermoore hir mooste wonder was
 How that it koude gon, and was of bras;
 It was a fairye, as the peple seemed.
 Diverse folk diversely they deemed;
 As many heddes, as many wittes ther been.
 They murmureden as dooth a swarm of been,
 And maden skiles after hir fantasies,
 Rehersynge of thyse olde poetries,
 And seyden it was lyk the Pegasee,
 The hors that hadde wynges to flee;
 Or elles it was the Grekes horse Synon,
 That broughte Troie to destruccion,
 As men in thise olde gestes rede.

Critics too often disparage the people in Cambyuskan's court, ignoring the fact of their "deeming" or intellectual pursuit in favor of the narrator's characterization claiming they are "lewed" and thus not worthy of consideration. I feel that the Squire's description of their *lewednesse* was a product of Chaucer's wish to show their ignorance of cause. Whatever the tale-telling Squire may think of their intellect, Chaucer represents a courtly crowd engaged in an analytical approach to a common set of traditional romance marvels, forming "skiles after hir fantasies" (205) or hypotheses to follow their suppositions, and it is this courtly milieu that should underlie any questions about the *lewednesse* of the courtiers. At the least this indicates an interest in how the marvels worked and upon which historical models they might

have been based, demonstrating the courtly entertainment inherent in curiosity about marvels. In maintaining the ignorance of the crowd, Chaucer perhaps draws a distinction between the many levels of knowledge of cause represented in the tale.

Chaucer elaborates on the equation between the appearance of romance marvels among the revelers and the business of inquiring into their workings, as another speaker confirms the relationship between the marvels of romance and the aristocratic cultural practice involving technological marvels (V.216–20):

Another rownded to his felawe lowe,
And seyde, "He lyeth, for it is rather lyk
An apparence ymaad by som magyk,
As jogelours pleyen at thise feestes grete."

The crowd initially proposed classical antecedents for the equine marvel, citing Pegasus and dwelling on the deceptive purpose of the Trojan Horse. However, they quickly link it with the common sort of courtly trickery Chaucer represents in the *Franklin's Tale*, associating it with some "apparence ymaad by some magyk." The difference of opinion is instructive, for the marvel, understood not as supernatural but rather as a product of natural forces and certainly as entertainingly deceptive, has been transformed by Chaucer into the stuff of jugglers and *tregetours*, a mundane marvel for courtly entertainment.

The narrator of the passage concludes the analysis of the horse with a derogatory comment on the crowd's inability to figure out things that were "maad moore subtilly / Than they kan in hir lewednesse comprehende," thereby linking understanding to the necessity for some degree of technical mastery. This further emphasizes the technological underpinnings of courtly marvels in romance settings, and points to Chaucer's likely familiarity with both sides—production and consumption—of the *mirabilia* produced for courtly entertainment. In this his role and perspective resembles that of the middlemen and *techne-crats* among whom he worked. Thus we can better understand his impetus to technologize the marvels of romance, taking the fantastic flying horse of *Meliacin* that was his textual source and altering it into a device whose purpose was to pose a game of inquiry. Even in its original late thirteenth-century manuscript setting, the horse had begun to exhibit some of the qualities of mechanical artifice (see figure 2.3). Figure 2.3 shows the horse in an illumination from a manuscript of Chaucer's source, an image displaying some visual representation of the control mechanism, perhaps due to its proximity with the more conventional courtly marvel performing at the left. This once again suggests that



Figure 2.3 Automaton and flying horse, MS.BN.Fr.1455, fol.12 (image courtesy of the Bibliothèque nationale de France)

Chaucer was less an innovator than a reader and recorder of others' innovations—not a scientist or mechanician, but a savvy *factotum* poised in the nexus of courtly culture, arts patronage, and class-based perspectives on art and literature.

The contrast between romance marvels, their incarnation as objects of amusement, and the divine causation still reserved for some marvels is emphasized in the Squire's ensuing discussion of the marvels. The mirror is subject to a similar inquiry in which this traditional marvel of the Virgil legend is reduced to operating by angles and reflections, a supposition reinforced by citing a list of current treatises on the science of optics. The crowd goes on to relate the sword to the historical spear of Achilles, but immediately turns to the closely guarded sciences of metallurgy and medicine to derive the cause for these traditional associations. In each case, Chaucer transmits traditional marvels not as the abstract supernatural wonders he found in his romance sources, but instead as technological artifacts whose causes are sought—and bought—by the courtiers. However, the Squire's Tale's courtiers are apparently stumped by the ring, with its power to provide pure communication. This marvel may offer another clue as to how Chaucer conceptualized his re-presentation of courtly marvels, for the courtiers' biblical analogues seem to imply a divine origin for the ring's power. In treating a biblical marvel differently within this investigative narrative, we hear an echo of the currents in contemporary natural science and theology underlying the analysis of marvels in this tale, for divine interventions

in the natural world were exempt from inquiry. Chaucer here parallels the practice of reserving “Goddess pryvetee” beyond the scope of science, even as he opens the rest of creation to investigation as natural phenomena (V.256–60):

But, for they han yknowen it so fern,
 Therefore cesseth hir janglying and hir wonder.
 As soore wondren somme on cause of thonder,
 On ebbe, on flood, on gossomer, and on myst,
 And alle thyng, til that the cause it wist.

Chaucer classifies romance marvels and natural phenomena together, indicating the degree to which both literary and natural phenomena had become subject to empirical analysis of natural cause by the later fourteenth century, while conforming to contemporary theological approaches to *mirabilia*. The courtiers express wonder over such natural phenomena as thunder, tides, spiders’ webs, mist, and “alle thyng, til that the cause is wist”: like the mechanical *mirabilia* of the courts or the marvels of the *Franklin’s Tale*, natural phenomena are only marvelous until the worldly cause is known, unless the divine willed it. This is the “secularization” of the supernatural LeGoff refers to in his discussion of *mirabilia* in the late Middle Ages.⁴⁷

But as with other Chaucerian marvels, the matter is not closed with a single scene or incident. The Squire uses rhetorical circumlocution to avoid detailing the further exploits of the courtiers except in sparest detail, until the khan professes an interest in understanding the mechanism behind the marvelous steed of brass. The stranger-emissary explains the workings of the mechanism in great detail, with special emphasis on the secret he is conveying to the khan (V.315–7):

But, whan yow list to ryden anywhere,
 Ye mooten trille a pyn, stant in his ere,
 Which I shal yow telle bitwix us two.

Later in the same passage, he repeats this formulaic emphasis on sharing concealed knowledge, which will be imparted (V.331–3)

Whan that yow list to clepen hym ageyn
 In swich a gyse as I shal to yow seyn
 Bitwixe yow and me, and that ful soone.

The emphasis Chaucer places on the shared secret of the horses’ operation evokes contemporary scholastic thinking on the nature of *mirabilia*: a marvel,

whether a natural effect or the product of mechanical deception, is something whose cause is hidden, but which may be understood in natural causal terms. And once its cause is understood, the marvel ceases to be marvelous in the traditional sense. Such would have been the case with the manmade *mirabilia* of Chaucer's diplomatic and courtly experience as well.

Marvel-reading in Chaucer's poetry situates real-world technology and intellectual inquiry as factors in the experience of romance marvels, intensifying the wonder with which we experience his representations over 600 years later. Chaucer's depiction of romance marvels suggests a complex and often obscured idea of the way *mirabilia* functioned outside the literary confines of romance in late medieval culture. Romance marvels, which had for centuries evoked wonder through their supernatural qualities when read off the page, had by Chaucer's time become commercialized accessories that were produced and traded for the validation of noble identity. Read against the identity-politics of courtly entertainment, contemporary theology, and his experience of science and craft, Chaucer's rationalized romance marvels show what marked shifts *mirabilia* had undergone in a very few years. William Eamon has suggested that the supernatural—the realm occupied by traditional romance marvels—may have provided medieval thinkers a cultural space between theology and craft where scientific problems could be worked out under the guise of magic.⁴⁸ Chaucer appears to achieve the same effect as this cultural space by negating magic in his representations of *mirabilia*, rationalizing formerly supernatural genre marvels to form a unique practice of romance. Chaucer's fluid social perspective encompassed both the crafts and the courts, and he may have experienced *mirabilia* both as genre wonders and as products of craft and science. In his works these mechanized literary motifs are brought back into the romance text. There they function as markers of Chaucer's ambivalence, for his enthusiastic representations of *mirabilia* are often made mundane by skeptical inquiry or irony, perhaps conditioned by conflicting contemporary approaches to technology.

CHAPTER 3

CHAUCEER'S BODY: THE SUBJECT OF TECHNOLOGY

Until this century, the best mechanical analog for thought was clockwork (recognizably inferior to biology), and the fantasy of creating something with knowledge could be achieved only by giving the mysterious quality of life to some dead or inert mass, risking the gods' wrath or vengeance.¹

Bodies and Machines

Chaucer yields much to the critic intent on coming to terms with the lived experience of *mirabilia* in the late fourteenth century. But if in chapter 2 we saw the poet as *cognoscenti*, participant, and critic, in this chapter we will see Chaucer's concerns with the more spiritual and historical implications of human relations with marvelous machines. Here Chaucer takes a darker view of awe-inspiring *mechanicalia*, invoking troubling metaphorical connections between the corpus, or natural body, and the new and clever devices with which he was coming to terms. It therefore seems worthwhile to extend the discussion of man-made marvels to trace the fainter imprint of their implications for the human spirit and body.

The *Squire's* and *Franklin's* tales emphasize the material aspect of Chaucer's representations of *mirabilia*, the corporealization of romance marvels as fabulous illusions and animated *mechanicalia*. These are objects of courtly culture to be exchanged, purchased, probed, and scrutinized as part of the modified and commodified form of wonder experienced in court and civic settings across Europe. Chaucer represented such marvels not as potentially divine interventions in the world, but as material objects—devices of natural and social interest whose most immediate effects could be tallied in social capital.²

Through reference to the potentially deceptive technologies that drove marvelous *automata* and other performative *mirabilia*, a complementary discourse on the spiritual effects of manmade marvels on the human subject comes into focus even in works where manmade marvels and the magnificence of court performance are not focal elements of the story. Chaucer chooses to represent these negative effects through material bodies, casting the composite body or *corpus* as the subject of technology in the *Num's Priest's Tale* and the *Canon's Yeoman's Tale*.

In directing his attention to the relationships between machines and the body, Chaucer invokes the danger to the soul implied by the misuse of technical artifice, indicating his awareness of the body as the material and historical subject of technology. In doing so he brought no innovation, but rather participated in a widespread ambivalence about the relationships between bodies and machines, one he probably saw rooted in the literature of his French contemporaries and never fully resolved into a unified perspective.³ In this respect, ideas about bodies and machines circulate closely in the works of Froissart, Chaucer, and Christine de Pizan. Chaucer may have been the first to put clocks and bodies in circulation with the idea of courtly status, for in all likelihood the clock that chimes at the end of *The Book of The Duchess* references a status symbol since the "mechanical clock was an exterior sign of wealth, a status symbol, if you will, of the rich and powerful such as John of Gaunt" and that the combination of the beloved belle and the clock's bell equates Blanche with the measure of heart made explicit in Froissart's *Li orloge amoureuse*.⁴

In one of the earliest poetic conflation of clocks and bodies, the metaphorical clock replaces the natural rhythms of the lover's heart in Jean Froissart's *Li orloge amareuse*. Froissart's poem, a lengthy courtly love conceit probably written in the 1360s, is an extended, blazon-style metaphor in which the verge-and-foliot mechanism controlling the pace of the clockwork symbolizes temperance in the lover's heart. Playfully drawing an analogy between the formal aspects of courtly love and the workings of a clockwork escapement, the poet displays his mastery of the devices of courtly love poetry and the devices of magnificent courtly display by placing the mechanical device among his lyric metaphors. But as we shall see in Chaucer and in Christine de Pisan's *L'épître d'Othéa*, the apparently positive portrayal of a somatic mechanism motivates cooler currents within an otherwise playful poem.

Françoise Paheau asserts an ambiguity that I wish to emphasize about medieval culture's multivalent negotiations with mechanical marvels, finding in Froissart's *Li orloge amareuse* a negative attitude toward the "tyranny of the elemental machine."⁵ After all, clockwork technologies were closely associated with Pygmalion's attempt to animate his statue in

the late thirteenth-century *Roman de la rose*, in one of the earliest morally ambiguous clockwork allusions in western Romance (RR.21033–6):

Puis si fait sonner ses reloges
 Par ses sales et par ses loges
 [A res trop sotivement
 De pardurable movement].

Throughout his halls and chambers he had made his clocks chime by means of intricately contrived wheels that ran forever.⁶

The artificer is credited with enormous skill in a range of crafts (RR. 20817–30) and dedicates them to challenging nature and to creating an idolatrous automaton.⁷ Pygmalion's idolatrous creation is iconographically associated with Augustine's *concupiscentia oculorum*—lust of the eyes—suggesting that the associations between the machine and the animating force of Pygmalion's clockwork may signal the potential moral danger inherent in the period's delightful mechanical contrivances. Here delight in the animated device may put the soul at risk by exciting worldly lust.

Christine de Pisan's *L'épître d'Othéa* also characterizes the relationship between the marvelous new mechanism and the body. Raised in the magnificent court of King Charles by her father, a court astronomer and familiar of Nicole Oresme, Christine was probably more familiar with advanced thinking on the implications of the new technology than any woman of her time. She includes in the Pygmalion sequence of her poem a moralization equating the artificer's efforts with bodily lusts, and specifically refers to the spiritual cost of interacting with the animated image (22.2–5):

Ne t'asottes pas de l'image
 Pymalyon, se tu es sage,
 Car de tele ymagee paree
 Est la beauté trop comparee.

Do not be besotted with the image of Pygmalion if you are wise, for the beauty of such a wrought image is purchased too dearly.

Manuscripts of the *Othéa* that illustrate Pygmalion's supplication to Venus seem to avoid depictions of the animate body itself, suggesting that this illustrates Christine's "turn away from the Pygmalion myth as an allegorization of fetishism."⁸ In doing so, the text assures us of the bodily locus of lust, even as the poem and its illuminations reject the artificer's lechery in favor of courtly *temperantia*.⁹ Additionally, it should be noted that illustrations of the Pygmalion sequence of the *Romance of the Rose* tend to diverge from the text's reference to carving in ivory, instead depicting the body not as a small idol but as a life-sized carving whose verisimilitude sharpens

awareness of the artificiality of the animated body, a characteristic shared in some manuscripts of the much later *Roman de Meliadin*.¹⁰

Desmond and Sheingorn note that all of the *Romance of the Rose* manuscripts to which Christine had access share this characteristic sizing, and also emphasize that most visual programs in illuminated manuscripts of the *Romance of the Rose* give rhetorical emphasis to the episode by ending with Pygmalion.¹¹ This animated woman forms a symbolic parallel to the Rose that is the object of the narrator's lust throughout the poem; the emphasis on the constructed nature of the object of desire, the object-ness or thingness of this mechanical product of Pygmalion's craft, is intrinsic to the overt allegory on sexual lust. This aspect is underscored by the frequency of textual rendering of clocks in close proximity to the idol's body.¹²

This conflation of body and machine locates the implications of the image in both body and soul, and emerges in other texts to tie the use of clockwork metaphors to the larger cultural issues surrounding the physical devices themselves, complicating the suggestion that the temperate "measure" of the machine is the singular notion binding early clockwork metaphors in European poetry.

If we look beneath the surface thematics of the animated thing or technological body, reading across the disciplines and among the traces of these largely lost machines, ambiguities emerge that cause us to reconsider anything resembling the full approval of clockwork marvels among medieval writers and thinkers. I contend that the conflation of machines and bodies appearing in many texts suggests a widespread anxiety about the effects of technology—whether of the tyranny of the clock or the idolatrous reproduction of animate objects—that plays out in representations of the period's newly desacralized *mirabilia*, often with localized political import that is only revealed as the manmade marvels are excavated from the sediments of an incomplete historiography of marvelous courtly ephemera.

Bolens and Taylor correctly note that "the wonder of clockworks was in the air in the intellectual and mechanical milieus of Froissart and Chaucer," but the knowing ambivalence Chaucer directs at the manmade marvels of the *Squire's* and *Franklin's* tales turns to negative evaluation as Chaucer comes to terms with manmade *mirabilia* on a more deeply spiritual level in two tales that examine two widely divergent but demonstrably materialist philosophical practices that emerged into prominence during the fourteenth century: skeptical empiricism and alchemy.¹³

In the *Nun's Priest's Tale*, Chaucer infuses a comic beast fable with philosophical gravity, employing a mechanical metaphor to frame the comparative basis for an avian debate about God's agency, the idea of predestination, and mankind's free will. In the *Canon's Yeoman's Tale*, Chaucer's representations of the pilgrims' belief in alchemical efficacy offers insight into

a narratorial stance on the negative effects of material deception. In this tale, the Canon's technical artifice figuratively interpolates and literally erodes the human condition of the Yeoman. Through the deceptive practices of alchemy and the reciprocal effect on the human spirit and material body of this "slyding" science, Chaucer reveals anxieties conflating the misuse of *techne* and Adamic prohibitions about forbidden knowledge, situating his approach to science in Christian salvation history. This chapter reinforces some of the findings in the foregoing discussion, but moves beyond the court environment to show how ideas about the incipient technologies behind phenomenologized *mirabilia* intruded into the very bodies that *automata* were built to mimic: in these tales, the machine colonizes the human subject.

Chaucer's representations of *mirabilia* offer critics ground for coming to terms with radical new proto-scientific ideas emerging from theology to interrupt the established Augustinian paradigms of his culture. He reveals a sensitivity to cultural flux ironically unavailable to few but those, like himself, whose social position was itself an innovation, crossing boundaries of social class and material expertise. Chaucer, a social hybrid of the increasingly mercantile economy of fourteenth-century Europe, offers through the destabilized signifiers of *mirabilia* a nuanced series of readings of cultural transformations around the sciences, which modern critics have suggested might be invisible to those embedded within the shifting culture.¹⁴

Chaucer exhibits a uniquely technological understanding of *mirabilia*, for in his works marvels are always *phenomenon* or appearance, never *noumenon* or real: Chaucer's marvels have marvelous effects in the world, and so cannot exist only as traditional textual *mirabilia*. Instead they are demythologized, made mundane constituents of an increasingly empiricizing worldview of which Chaucer cannot fully approve, but which he can only fully control within the text. It is not clear that Chaucer consciously produces the effects in his literature that lead me to this conclusion; nevertheless it is clear that in the tightly controlled environments of his poetry he is in many ways confronting issues he may not have been culturally licensed to carry into his technical writing. Thus we see a pattern in which Chaucer represents *mirabilia* in proximity to his concerns over notions of the world grown old, using traditional poetic forms and content. Chaucer's educated, conservative theological concerns employed the discourse of *mirabilia* as a literary *topos* for coming to terms with the meaning of the technologized marvels around him; if one chooses to believe that he did not intend to use marvels for this purpose, at the very least one must explain why he hid his readings of *mirabilia* in plain sight.

Mechanistic marvels surface in Chaucer's romances only to be rendered mundane, removed from divine agency as mankind pursued worldly interests

through his devices. These pursuits—the quest for modern diversions and delight in *neuefangelnesse*—had the potential to draw negative spiritual repercussions. Chaucer examines these in his tales, but the spiritual ground upon which he works is evident elsewhere, for example, in *The Former Age*.

Techné, Modernity, and Loss

Chaucer's concern over the moral decay brought on by modern *techné* is probably best exemplified in the ironies of *The Former Age*, an enlargement of metrum 5, book 2 of Boethius's *Consolation of Philosophy*. Rather than a capsule of Boethian *contemptus mundi* or an allegorical treatment of Ricardian politics, the passage Chaucer selected to enlarge for his own poem presents a dichotomy in which technology is both a benefit to moderns and a symbol of the fall.¹⁵ His comparative critique, casting the moral decay of modernity against the pristine world of the Golden Age of humankind, is delivered in distinctly technological terms through Chaucer's language and thematic choices. In this poem, the irony emerges from Chaucer's self-reflexive admission of complicity in modern technology, judged against the better life of mankind in the ages when yet "ungrobbed lay the vyne." The implications of technology in Chaucer's postlapsarian lament speak to his very specific attention to his position as a modern in a supposed late age of salvation history.

One of the defining characteristics of the comparative motif in *The Former Age* is the mechanical artifice defining mankind's weakened estate. The poem begins with a paraphrase of Boethius's *Consolation of Philosophy* 5.2, and expands on the Latin work and Chaucer's own translation, *Boece*, as well as a bit of Ovid and the *Romance of the Rose*.¹⁶ Chaucer recasts the didactic Latin poem as a distinctly technological affair, defining the Golden Age through a negative catalogue outlining what had not yet been accomplished through *techné*. This aspect of the poem seems inflected with the same sort of irony we feel with the reading of Alexander the Great's epistolary conflict with the Gymnosophae, and is especially reminiscent of the young Macedonian's hapless disbelief at the lack of magnificence in their antimaterialist lifestyle. John Block Friedman has noted the specifically antitechnological stance in this exchange.¹⁷

Chaucer develops a self-conscious irony in this comparison, describing early man's primitive diet of mast and *pounage*—colloquially, scrap food for hogs—against the tools of modern medieval life. Significantly, the bulk of the references to modern culture and technology play upon the rich spices, sauces, and other aspects of gastronomic culture, here enabled by the handmills and other commonplace technological devices of London's merchant class.¹⁸

Chaucer catalogues simple technologies such as flint and steel alongside the mill, mortar, handmill, and plow, using a negative formula comparing modern expectations with what was unneeded in the Golden Age. These negative comparisons are followed by openly self-conscious references to mercantilism, such as the merchant who “yit ne fette outlandish ware” and the vines not yet exploited by the vintner (ll.14–6), suggesting a Chaucerian nod to professional, familial complicity, and fixing the limits of the Golden Age through an ironic self-indictment of modern technological artifice, convenience, and luxury. His derogatory vocabulary for the material culture of the former age reinforces the ironic stance of a narrator intimately aware of the contrast between the redemptive technology of the Augustinian toolmaker and the lustful pursuits of idolaters in the aging world.

In the fourth stanza, warfare, profit, and *covetise* produce a radical shift from the gentler ironies of the first stanzas. In these lines, the narrator turns away from the negative catalogue developed in ll. 9–24, deepening the historical perspective on *techne* and shifting into a first-person condemnation of man’s exploitation of the earth, as the word *first* bears the poem’s thematic trace of the fall (FA.27–30):

But cursed was the tyme, I dare wel saye,
That man first dide hir swety bysinesse
To grobbe up metal, lurking in derknesse,
And in the riveres first gemmes soghte.

This sentiment, linking man’s *covetise* with the fall and subsequent necessity of technology, is obliquely echoed in the Canon’s Yeoman’s denouncement of alchemy, for the “cursednesse / Of coveytesse, that first our sorwe broghte” (31–2) is one of the main themes developed in the Yeoman’s condemnation of “the doublenesse / of this Canoun, roote of alle cursednesse!” (VIII.1300–1). The gentle ironies of modern life give way, in stanza four of *The Former Age*, to an earthly tyranny rooted in the fall and mankind’s first need for tools to delve and spin; modern technology, however convenient and positive on the surface, carries a grim reminder to the faithful that the fall made it a necessity, that it is an imperfect prosthetic, and like all prosthetics, a reminder of that which was lost.¹⁹

That technology should play this dual role in Chaucer’s poem is no surprise. Rather, it reflects the poet’s ambivalent understanding of the social role of technology in a period when mankind the toolmaker first achieved the ability to produce technological luxuries of questionable moral order. Chaucer’s ambivalence is grounded in a list of things mankind did not possess in the Golden Age, yet this list is a remarkable register of the mercantile environment of Chaucer’s life and work—an irony too choice to slip

by this poet, and one that ties in well with the professional life of the family that put him into professional service that would expose him to some of the most magnificent courts of his lifetime.²⁰

The reader is invited to consider his own complicity through the softer critique of the first three stanzas. Chaucer heightens this self-awareness through an ironic stance suggesting that one's own transgressions are never as dire as those committed by others elsewhere and else-when. In the spatial and temporal senses, *The Former Age* distances modern reliance on *mechanicalia* from the depredations of mankind's forebears without letting humanity off the metaphorical hook.

In stanza four, the wistful catalogue of mercantile artifice gives way to a more forceful department with a curse against the time when mankind first undertook the "swety bysnesse" made necessary by our first transgression against the divine. In stanza eight, Chaucer links this inaugural transgression, in which the search for forbidden knowledge condemns mankind to the progressively senescent world, to two important figures in an interpolation not present in the Latin original of his text (FA.56–63):

Yit was not Jupiter the likerous
 That was fader of delicacye
 Come in this world; ne Nembrot, desirous
 To regne, had nat maad his toures hye.
 Allas, allas, now may men wepe and crye!
 For in oure dayes nis but covetyse,
 Doublesse, and tresoun, and envye,
 Poyson, manslaughter, and mordre in sondry wyse.

Here the so-called second fall of Babel is yoked to the *doublesse* inherent in misguided uses of technical artifice. Invoking Nimrod, Chaucer may suggest the moral monster mankind becomes through sins associated with technology, and the presence of Jupiter, avatar of bodily lusts, reinforces this notion.²¹

The Former Age presents a capsule history of technology in which the regenerative potential of postlapsarian *techne* has been lost, misdirected through sin. Boethian thematics provide the topical frame for an embedded critique of mercantile complicity and noble excess, and in Chaucer's poem, not only technology but its uses are brought into question through his contextualization of *techne* in history: however beneficial and regenerative it may be, it is rooted in and points toward transgressions against the divine.²² Although there is nothing in this poem to suggest the manmade *mirabilia* with which we are concerned, it seems appropriate to explore the Chaucer's underlying attitudes about the material culture of technological production

before we return to the apotheosis of *techne* realized in the manmade *mirabilia* of late medieval culture.

As we pursue this attitude, the potential for sin in such matters is not always expressed so clearly, but it emerges as a spiritual concern in both the *Nun's Priest's Tale* and the *Canon's Yeoman's Tale*.

Magnificent Clocks and a Superlative Cock

In the *Nun's Priest's Tale*, Chaucer engages manmade marvels obliquely while taking on an empirical philosophical license that in the thirteenth century destabilized the traditional idea of *mirabilia* in the Augustinian sense, as evidence of God's efficacy in the world. In contrast to the secondary role of rational discourse in the more direct treatment of manmade marvels in the *Squire's Tale*, the *Nun's Priest's Tale* is quite clear about the competing philosophical issues involved in the late fourteenth-century debate between older authorities and the "new native empiricism" of the period.²³ Of particular interest are the stances taken as Chaucer's characters employ debate and citation, compiling an overlapping, interdependent, and occasionally confusing mass of textual authorities. At best, the text's stance on empiricism can be called "multivalent," and little critical agreement is evident beyond this somewhat unsatisfying conclusion. However, if we step back to direct our attention to the poem's frame, the ideological framework of the debate, and the poet's use of sources, we may open for consideration the deeper significance of this debate in Chaucer's work.

The *Nun's Priest's Tale's* dream debate centers on the underlying intersection of traditional and newly formulated scientific discourses, based in established modes of source-reference to Augustinian sources on the one hand, and emergent thinking influenced by nominalism on the other.

This dream debate should be read within the framework Chaucer provides through a rarely remarked mechanical metaphor: I refer to the poet's vital yet subtle comparison between Chauncleer and England's new public marvel, the mechanical clock.²⁴ Chaucer's seemingly simple, and to us almost naturalistic, comparison between time-keeping entities has deep implications for any analysis of the ensuing medieval dream debate: the cock and the clock allow us to read both the dream debate and freewill discussion as a cohesive unit, providing a thematic continuity for the embedded philosophical matters. In the debate we can observe Chaucer working through contemporary scientific debates within his beast fable, using the traditional literary debate genre as a formal grounding for coming to terms with an emergent proto-scientific discourse and its relationship to the material presence and spiritual implications of the technologies that

Chaucer knew lay behind the magnificent facades of the period's manmade marvels.

Reading the dream-interpretation debate within the contextual framework provided by the comparison between the cock and the mechanical clock reveals a cultural anxiety over the submerged scientific debate's resolution. This anxiety reflects back on Chaucer's text, figuring technological innovation as the spiritually-disruptive force behind the seemingly light-hearted domestic squabble over dreams. In this way the framing comparison between a cock and a mechanical clock offers insight into Chaucer's ideological position in the culture's ongoing negotiations between technology and spirituality.

Although Chaunticleer's magnificent appearance and bearing may be a comment upon the courtly magnificence of Richard II, within the *Nun's Priest's Tale* we are invited down into a narrowing concentric focality highlighting Chaunticleer's colorful person against a backdrop of surrounding layers of domestic and agricultural monotony.²⁵ I will not push so far as to equate the rooster with the myriad mechanical birds that had populated romances and travel narratives since the early days of European literature, for within this tightly constrained locality focused upon the personified cock, the text explicitly articulates a preference for Chaunticleer's natural talents over the new mechanical contrivances (2851–8):²⁶

His voys was murier than the murie orgon
 On messe-dayes that in the chirche gon.
 Wel sikerer was his crowyng in his logge
 Than is a klokke or an abbey orlogge.
 By nature he knew ech ascencioun
 Of the equynoxial in thilke toun;
 For whan degrees fiftene weren ascended,
 Thanne crew he that it myghte nat been amended.

In this passage, Chaucer simultaneously signals his understanding of technical aspects of astronomy and related horology, even as he attributes to nature the rooster's extraordinary accuracy in measuring degrees of equinoxial ascension. The animal's measure of degrees signals his embeddedness within the natural rhythms of a divinely ordained universe, in which the innovations of *techne* are explicitly unnecessary. It is this aspect of the passage that divorces the science of astronomy from the physical clock in the comparison. Chaucer was of course quite familiar with the practice of observing the motions of the stars.²⁷ By comparing the manmade clock and the magnificent bird, Chaucer negatively contrasts the works of man with the works of God in nature, signaling a privilege he will maintain throughout

the story. This irony would not pass by the technical cognoscenti of Chaucer's day; even as late as ca.1480–90, Iacopo del Sellaio's panel painting, *The Triumph of Time*, depicts Father Time himself using an old-fashioned hourglass to set the elaborate mechanical clock upon whose balanced weights he perches.²⁸

Whatever may be said later about his personality and its bearing on the tale, from the beginning, Chaunticleer's voice is "murier than the murie organ," and his crowing "wel sikerer. . .than is a klokke or an abbey orlogge" (2851–4). This comparison pits the cock against these "most ingenious devices of human technology. . .the outstanding contrivances of the period. . .and the thing itself was still an object of wonder."²⁹ The cock's natural sound and timekeeping are clearly better than those produced by these mechanical marvels, which simply seek to imitate the bird's natural offices. In Chaucer's comparison, man's imitations of nature do not measure up to the natural abilities of Chaunticleer, the natural product of God's creation. This passage betrays a subtle thread of antitechnological sentiment pervading Chaucer's treatment of *mirabilia*. With this framing motif Chaucer attends to the greater spiritual picture, in which *techné*—and the unreliability or duplicity of scientific progress upon which it rests—drive mankind further from the divine as it is expressed in nature.

The comparison of cock to clock forms a significant clue to the text's stance on the nascent empiricist practices of skeptical philosophy. The marvelous cock-clock frame can be considered in the context of "the new relevance of analogies between the contrivance of the divine artificer, whose reasons man could not penetrate, and the contrivances man could understand because he made them himself."³⁰ The cock's "natural privilege" signals Chaucer's authorial displeasure with the worldliness implied by the generalized but certainly apprehensible cultural shift toward empiricism, as represented in the inferior reproductions of nature created by men.

From this comparative representation of a technological marvel we are able to get a better idea of Chaucer's relationship to his own scientifically advanced source material. Despite a facile representation of competing doctrines, Chaucer's text manifests skepticism about accepting man's attempts to replicate creation, privileging the natural cock over the marvelous clock in a tale from which we must "taketh the fruyt, and lat the chaf be stille" (3443). Chaucer, through the Nun's Priest, displays a coherent understanding of the up-to-the-minute scientific doctrine in sources whose texts were within his understanding but beyond his control; nevertheless, in his own tightly controlled work, the fruit of faith prevails through the divinatory power of an increasingly outmoded dream.

In noting parallels between the work of Robert Holcot, the Oxford Dominican and skeptical philosopher, and Chaucer, I follow Pratt's work on the common patterns of discourse used by each author. He notes that Pertelote's argument is essentially humoral, and Benson concurs that this reflects contemporary medical practice.³¹ Both critics agree with Curry on the quality of Pertelote's scholarship and the efficacy of her prescription, both based largely on the empirical, largely Aristotelian-influenced practices of Rhazes, Petrus Albano, and others.

Chaucer's primary source for the philosophical underpinnings of the *Nun's Priest's Tale*, Robert Holcot's *Super sapientiam Solomonis*, was a patently progressive work, but in keeping with contemporary practice, Holcot was obliged to at least acknowledge the divinatory work of dreams. His skeptical text embodies the current scholastic perspective of Oxford on these issues, and Chaucer's text in turn reflects this skeptical source to a greater degree than is often acknowledged. That he uses this source to make essentially conservative points is clear, highlighting the extent to which Chaucer negatively regarded the demythologization of the world that accompanied most aspects of *mirabilia*. The origin of most source material for the *Nun's Priest's Tale's* dream debate in a single, scientifically progressive source, betrays in Chaucer's text a tendency to deliberately misuse the new doctrine's combination of authorities, ironically playing these sources against themselves. Chaucer's narrative is in effect a performance of the doctrinal split visible throughout the progressive scientific discourses of his day.

This conservative tendency in Chaucer is the origin of the cock-to-clock comparison that frames the whole tale by privileging God's work over man's: it is Chaucer's expression of faith, appearing in a text dominated both in narrative and in source by the growing empiricism of the fourteenth-century scientific discourses with which he was familiar. This framing device forces the reader to view the text through the "Augustinian privilege" signaled from the outset by Chaunticleer's superiority as a natural creature, and this continuity in the text is maintained as the reader recalls man's relationship to God implied by the freewill addition.

Chaucer reinforces this idea before reverting to the catalogue of Chaunticleer's physiognomy by indicating that when the cock noted precisely "degrees fiftene weren ascended," his timekeeping "myghte nat been amended." The mechanisms that Chaucer has added to the standard Reynard narrative are no corrective to the products of Creation, but rather serve as manmade foils, their imitation—or limitation—only highlighting the perfection found in creation, even embodied in the rather silly cock, Chaunticleer.

This comparison between man's clock and the natural cock draws attention to a pervasive anxiety in Chaucer's text over the clash between the

major scientific discourses of his time. In denigrating emergent empiricist tendencies by initially privileging Chaunticleer's God-given talents, Chaucer's tale offers a preview of the upcoming debate. Chaucer's anxiety about technology and sin emerges more fully during this dream debate, in which Chaucer's characters occupy loosely opposed positions from the scientific realm. Their opposed stances, however, are not only the product of authorial irony or multivalence, but also function as an idealized dramatization of commonplaces from an evolving scientific discourse whose implications underlie technological progress and which bring man's will and God's will into potential conflict.

The terms of this debate, veiled in the comparison between the cock and the clock, are openly set in the first moments after the birds awake, as Pertelote immediately inquires after her husband's physiognomy, asking, "What eyleth yow?" (l.2080). Chaunticleer's first utterance enters the debate from the opposing ideological position, stating of his dream, "Now God. . .my swevene recche aright" (l.2896). Before the debate proper even begins, then, the cock and hen have already squared off into ideologically opposing corners, loosely aligned with evolving nominalist-oriented investigations of physical cause on the one hand, and the author's Augustinian Neoplatonic fideism on the other.³²

Pertelote, cast in the skeptical, and thus for Chaucer's tale, the oppositional stance, takes an approach to dreams that may be summed up in a single line: "ne do no fors of dremes" (l.2941). This paraphrase of Cato, *Distichs* 2.31, "somnia ne cures," follows her diagnosis of Chaunticleer's dream as an effect of humoral imbalance, in accord with contemporary medical practice. Her cure for the somatic cause of this dream is itself purely physiological, though we might wince for Chaunticleer at her advice to "purge yow bynethe and eek above" (l.2953) when we see the cure: "For Goddes love, as taak som laxatyf" (l.2943). This diagnosis and cure form the empirical side of the debate over the causes and meaning of dreams, excluding the supernatural or divine from consideration in the assumption that natural causes may always be found for unknown phenomena. From this perspective, dreams are precipitated in the bodily humors, and have no reliable meaning exterior to the body. By saying "ne do no fors," Pertelote gives a distinctly skeptical spin to Cato's proverb on the unreliability of dreams, leaving off the qualifier present in the source: *nam fallunt somnia plures*, "for dreams deceive many." This omission is a further indication of her adherence to empirical causes.

Pertelote's sole appeal to textual authority is followed by a brief discourse on medicinal diagnoses and apothecary cures, concluding with an appeal to ignore dreams. She marks the end of her speech through reference to her subsequent silence: "Dredeth no dreem; I kan sey yow

namoore" (2969). This silence, in addition to indicating the end of her diagnostic scientific discourse, may be taken to indicate the limited boundaries of the rather radical ideological framework in which she has been cast. The implications of Pertelote's argument remain tacit beyond this point because, according to the most recent scientific thinking on dreams, there was no reliable cause or meaning beyond the physical.³³ As will be demonstrated, the position that dreams arise within the individual is rarely taken to the extreme that Pertelote represents in Chaucer's narrative; most contemporary writers, however radical in their assumptions, nevertheless make leave for divine interventions even as they argue for natural over supernatural cause.

Chauncleer's rebuttal, rather than relying on the somatic approach favored by his mate, is couched in traditional rhetorical appeals to textual authority. Perhaps spurred by the hen's use of Cato, he immediately seeks to exceed his mate's sole citation; outlining his position on the basis of established authorities instead of through a search for natural cause (2971–81):

But nathelees, as touchyng doun Catoun,
That hath of wysdom swich a greet renoun,
Though that he bad no dremes for to drede,
By God, men may in olde books rede
Of many a man moore of auctorite
Than evere Caton was, so moot I thee,
That al the reverse seyn of this sentence,
An han wel founden by experience
That dremes been significacions
As wel of joye as of tribulacions
That folk enduren in this lif present.

Chauncleer is an adherent of older, Augustinian textual authorities: he eschews the more current sources of Pertelote's discourse on somatic causes for a series of texts from the favored Neoplatonic perspective. These stories, from Cicero's *De divinatione* 1–27 and Valerius Maximus's *Facta et dicta memorabilia* 1–7, are assumed by Pratt to be derived from sources contemporary to Chaucer, and it is in the representation of material from this genre that Chaucer, through Chauncleer, offers a distinct insight into the manner in which he prefers to handle the cutting-edge science of his contemporaries through literature.³⁴

Chauncleer's counterargument is based on a welter of authoritative accounts from Macrobius and Kenelm, biblical and classical incidents in which dreams are shown to have predictive value. That these stories were in large part taken by Chaucer from more up-to-date sources, and in particular from Robert Holcot's *Super sapientiam salomonis*, goes unremarked

by the authority-driven rooster. Instead, he cuts short his reference to Andromacha, from Dares Phrygius's *De excidio Troiae historica* 25, for a brief conclusion relating to modern medical practice (3151–60):

Shortly I seye, as for conclusioun,
 That I shal han of this avioun
 Adversitee; and I seye forthermoor
 That I ne telle of laxatyfs no stoor,
 For they been venymes, I woot it weel;
 I hem diffye, I love hem never a deell!

Chaunticleer offers the expected conclusion given his cited authorities, such as Chaucer's seemingly favorite citation, Macrobius.³⁵ To this he adds a final rejection of the physical causes and physiological solutions offered by Pertelote in her more modern diagnosis. He voices special defiance of these "venymes" of the newer science, later echoed ironically in defiance of his own logic in the succeeding passage.

Chaunticleer's subsequent rejection "of both sweven and dreem" in the transition from this pseudo-scientific discourse back to the beast fable is precipitated by acceptance of his wife's advice. Here, at the end of the dream debate, Chaunticleer's actions appear to acknowledge the value of her position, even though the tale will bear out a different conclusion regarding the nature of cause, when Chaunticleer's dream appears to come true.

Chaucer's text puts forward, in simplified terms, each side of the contemporary debate between pure faith and empiricism. This debate is a site of tremendous flux in doctrinal approaches to the sciences during Chaucer's time, as nominalist scholastic thinking began to in effect squeeze out the divine cause of most phenomena—Chaucer's world was literally beginning to look less marvelous, and he showed his authorial displeasure here and in lampoons of scholastics such as occurs in the end of *The Summoner's Tale*. By turning to the treatment of dreams and free will in Chaucer's textual sources, we can develop a better sense of the subtle anxieties at work behind Chaucer's *Nun's Priest's Tale*, enriching our sense of both author and text regarding the disposition of modern scholastic science.

Interestingly, Pertelote takes her Cato from Holcot's Lectio 103. Holcot, the Oxford Dominican, Cambridge lecturer, radical nominalist skeptic, and near-contemporary of Chaucer, concluded each section of his discussion of the humoral origins of dreams with the quote: "Sompnia ne cures, nam fallunt sompnia plures," an interpolation of Cato from contemporary sources.³⁶ Translated, it means "do not believe in dreams, for dreams deceive

many." In his Latin material the skeptical Holcot bridges the conflicting schools of thought only insofar as he leaves room for the divine origin of dreams. Otherwise, he actively seeks to discredit the practice of divination by dreams, because according to the radical scholastic logic practiced at Merton, Oxford, during this time, the overwhelming majority of phenomena, including dreams, have purely physical origins. Thus Pertelote's side of the debate represents an extreme case of the kind of skeptical approach to Neoplatonism common to figures such as Holcot and developing throughout the late medieval English sciences, even preceding Ockham and Nichol Oresme. Experience shows that supposedly supernatural experiences are almost always precipitated by physical causes and therefore lack the spiritual significance with which such phenomena previously had been imbued.

Thus, it is at best foolish to assume supernatural origins for dreams. Once again Chaucer cites the more authoritative source, ignoring medial source material in his allegiance to traditional forms of adherence to authority, but clearly we are no longer really entertaining Macrobean categories, despite Chaucer's citation practices. This methodology emphasizes Chaucer's anti-empiricist concern with dream interpretation, for the author of dream visions and adherent of traditional notions of history would have balked at the idea that dreams—and thus dream visions—had no overriding authority. His consciousness of this historicity is itself interesting, speaking to the fact that Chaucer was acutely aware of his own position in the shifting philosophical debate. That Chaucer defended traditionalist positions using the ridiculous Chaunticleer is perhaps another indication of the level of self-consciousness the author brought to the issues in this tale.

Curry has noted in his conclusion the feebleness of Chaunticleer's side of the debate, which he ascribes to the cock's inability to formulate a proof.³⁷ Instead, the rooster is easily distracted by marvelous stories, and blindly trusts his cited authorities. These authorities, however, come to Chaucer's text largely from Holcot, whose use of authorities must be understood, along with Chaucer's, in terms of the empirical tendencies of thirteenth- and fourteenth-century doctrine.

Chaunticleer's reaction to Pertelote's argument may be summed up as a simple reliance on authorities who say "the revers. . . of this sentence" (l.2977) and who prove the opposing case. These authorities, noted in Holcot and thought to be the source of Chaunticleer's Ciceronian stories, are present largely due to Holcot's own adherence to the Aristotelian dictum that, "no talk is altogether lost which is spread by many men," a distinctly empirical sentiment.³⁸ Chaunticleer, in citing these authorities, performs a misreading of current doctrine in order to support his flagging argument; so

it is mainly Holcot's empiricist thinking that keeps the older authorities in play at all, possibly signaling once again the ambivalent dimension to Chaucer's approach to these issues.

Despite his command of the stories, the rooster is the object of humor. The image of an egomaniacal rooster spouting discredited or old-fashioned authorities seems especially comic when we recall that his initial argument was set off not by Pertelote's empiricism, but by her attempt to use the authority of Cato to bolster her purely physiognomic cure. Of special interest here is the fact that Chaucer is using this tactic at the level of the narrative while mirroring it in his own approach to source material: Chaunticleer is a fool for mining outmoded authorities out of current sources, and Chaucer is clever for doing the same thing. It is as if Chaucer was aware that authority was coming under attack by this newly sanctioned form of inquiry.

The prophetic quality of Chaunticleer's dream is referred to independently in the passage preceding his capture, effected through "heigh ymaginacioun forcast" (l.3218). Pratt believes this wording signifies the celestial origin of Chaunticleer's dream, which like the dreams in all of Chaunticleer's authoritative stories, is of divine provenance. Divine origin, it will be remembered, is the one category of divinatory experience acknowledged by all commentators, and it is in no way limited to the Neoplatonic perspective. In short, Chaucer argues the conservative line by deliberately misreading from a modern, functionally empiricist source in an ironic take on his own position.

Here, the Priest's discourse on free will becomes especially relevant to the notion that the comparison between the natural cock and the mechanical clock in the frame of the tale provides a linking sentiment or concern holding the tale together. Holcot's explanation of the "necesitee condicioneel" later employed by Chaucer is a prime example of fourteenth-century empiricism: God granted free will despite his foreknowledge, removing himself to a distance from which his artifice in nature could only be discovered through empirical means of observation, or in very rare cases through divine revelation. Mankind under the scholastics during this period had to adopt empirical methods to discover God's hand in his world, as Aristotelian influences in theology removed the divine to the utmost ends of the causal chain.

After a series of moralizations, the final lines of the tale are voiced by Chaucer's priest in this verbal echo of the section on free will (ll.3444-6):

Now, goode God, if that it be thy wille,
As seith my lord, so make us alle goode men,
And brynge us to his heighe bliss!

Here the Nun's Priest, despite the moral failings hinted at by the Host, nevertheless in Chaucer's text maintains a positive cast through his adherence to the motivating force of God's will in matters of cause.

In the end, Chaucer, his priest, and the cock are alike in their highly educated mistrust of the skeptical scientific discourses of the day, but the lighthearted tone of the tale disguises what for Chaucer are the truly dark concerns for man in light of the empiricization of the world, the search for control over nature he decries with ironic humor in *The Former Age*. These concerns surface again in *The Canon's Yeoman's Tale*, an interruptive account of treacherous pseudo-science. In this narrative, the misuse of technology—in the form of apparently marvelous mechanical deceptions—contributes to the decline of mankind's body in the waning world, and is worthy of discussion for what it contributes to our understanding of the effects of marvelous technologies upon the medieval body.

Chaucer's Somatic Alchemy

In his unique representation of the "slyding science" of alchemy, Chaucer relates his darkest concerns regarding the spiritual and yet intimately somatic effects of misguided inquiry and the working of spectacular marvels upon humankind, as the Canon is transformed from a fresh youth into a leaden-skinned automaton through alchemical practice.

Chaucer knew of the somatic torments of alchemy. They were vividly personified through the alchemists of Dante's *Inferno*, Canto 29. The passage begins with Virgil's attack on Dante's curiosity, just before offering an allegory of the Garden in Grifolino's account of his own alchemical sins. Consigned to the depths of hell for trying to counterfeit nature's creation, the alchemists endured an eternal skin rash they were doomed to perpetually render from their own bodies with sharp fingernails. Capocchio says he is tormented for alchemically "aping nature," while Grifolino's alchemical torment was occasioned by a death dealt him for failing to perform a marvel of flight for Albrero of Sienna, who burned him for "fail[ing] to make him Daedelus."³⁹ The Holkam Miscellany's visual representation of Dante talking to two alchemists among the piles of scabrous bodies is typical of the emphasis the narrative puts on the somatic horror of their torment.⁴⁰

Dante's passage neatly brings together several themes at play in our greater discussion of manmade *mirabilia*, and Chaucer's narrative in the *Canon's Yeoman's Tale* shares with Dante's twenty-ninth Canto themes of misguided curiosity, the fall, and manmade marvels. In Chaucer's account, however, marvels such as the Canon's purported ability to flip the road to Canterbury upside-down are based in technology. However, the parallel holds since Dante's alchemist was burned for failing to perform the marvel

of flight, and Chaucer's alchemist's performance of a marvel puts his soul in jeopardy.

Alchemy is a potentially transgressive science, located on the verge between theology and natural philosophy. It exhibits dualities—of truth and deception, material and spirit, exposition and secrecy—that play into the structure of the narrative in ways that reveal much about Chaucer's concerns with the spiritual effects of deceptive manmade *mirabilia*.

Chaucer's concerns with *doubleness* illuminate his concerns about the potential for abuses in manmade *mirabilia*, and doubleness seems an inherent quality of alchemical practice. The allusiveness and deliberate obscurity of the surviving alchemical poetry of the period is evidence of the dual desire to communicate and to obscure; writing is communication, but the alchemists deliberately took advantage of the obscure qualities of language and poetic form. The reception of Chaucer's own text is implicated in this obscurantist ideology, for even into the Renaissance his story was thought to hide a kernel of alchemical truth.⁴¹ However, if we continue to follow Chaucer's lead, observing the interrelation of his characters in an attempt to derive a reading based on the author's representations of readings of *mirabilia*, we begin to sense that, for Chaucer, the dual structure of alchemy—practical on the one hand, spiritual on the other—is separated by a broad chasm of sin into which alchemists who perform marvels for sale are sure to fall.

The plot of *The Canon's Yeoman's Tale* is primarily concerned with the sleight of hand of a duplicitous alchemist who uses a carefully crafted contrivance, the "false gyn" of a mechanical crucible and fake mineral, to make coal appear to turn into silver. This contrivance is deceptive, but is not directly of concern except as a technical adjunct of the greater transmutation of the tale, in which the practice of false alchemy transforms a "yong, fresshe" man into a faded piece of the figurative machine that is deceptive alchemical practice. Chaucer concentrates on the deceptive practices of transmutation, and his detailed description of the practice is "absolutely obsessed with the materialism of alchemy."⁴² The concentration on the material—the technology of alchemy—reflects Chaucer's investment in the progressive decline Dean perceives in the tale's "degeneration. . . to the modern era."⁴³ Lee Patterson suggests that the poem establishes "Chaucer's awareness of himself as a modern poet oriented toward a dynamic future," in a compelling reading, but I would argue that Chaucer's concerns with the material circumstances of that emergent modernity has him in effect looking back, rather than forward.⁴⁴

The tale begins with a disruption that brings us back to the formation of the Canterbury game, as the pilgrimage is interrupted by the harbinger of the new science. The Canon's Yeoman arrives, a worn spirit in a faded

body, to warn the party that his Canon is, in effect, coming to disturb the continuity of the tale-telling game.

From the beginning, the Yeoman is compared to the alchemical apparatus with which he works in the laboratory, for "his forheed dropped as a stillatorie" (l.580). His master still at some distance, the Yeoman proceeds to expound on the nature of their enterprise, revealing the Faustian bargain one must undertake to dedicate one's life to the techniques and *techne* of alchemy. William Newman notes that "alchemists of the middle ages developed a clearly articulated philosophy of technology, in which human art is raised to a level of appreciation difficult to find in other writings until the Renaissance," and this yeoman practitioner's body will show the marks of such hubris.⁴⁵ He interrupts the game on behalf of his master, leading into a colorful description of the extent of the alchemist's power. Unlike the clerk of Orleans, the alchemist's workings are not illusionistic *apparences*, but have material efficacy (VIII.617–26):

... he is gretter than a clerk, ywis,
 Seyde this Yeman, and in wordes fewe,
 Hoost, of this craft somewhat I wol yow shewe.
 "I seye, my lord kan swich subtiltee—
 But al his craft ye may nat wite at me,
 And somewhat helpe I yet to his wirkyng—
 That al this ground on which we been ridyng,
 Til that we come to Canterbury toun,
 He koude al clene turnen up-so-down,
 And pave it al of silver and of gold."

Chaucer's language in this description of the Canon's marvelous prowess is absent the spirituality of the final lines of the poem, for which Chaucer has become known as an alchemist himself.⁴⁶ Instead, the language centers on the idea of craft and subtlety—the "wirkyng" of material *techne*.⁴⁷ Chaucer's awareness of alchemy as a technical, adulterate craft is apparent in his word choice as well as through his characterizations of the Canon and his erstwhile assistant.

The description of the Canon's powers provokes the Host to engage the Yeoman with a derogatory play on the idea of being wonderstruck; he initially seems to be impressed, exclaiming, "This thyng is wonder merveilous to me" but follows with humorous derision (629–32):

Syn that thy lord is of so heigh prudence,
 By cause of which men sholde hym reverence,
 That of his worshipe rekketh he so lite.

Rather than being impressed with such marvels, the Host maintains the assumption that the Canon is a poor clerk, whose ability is judged in the mercantile equation of his “power better cloth to beye.” Deriding the Canon’s slovenly appearance as *baudy*, *totore*, and *sluttish*, he asks the Yeoman whether his master’s “dede accord with thy speche,” suggesting the gulf between successful court magicians whose powers are proved through social position, and this tattered failure of an alchemist. The Host’s perspective provides a reading of cultural attitudes toward marvels performed by alchemists and suggests a reserved judgment at the very least, one borne out a few years later in Henry IV’s ban on alchemy due to fraudulent practices.⁴⁸

The marvel the Yeoman speaks of fails to jump the same credibility gap as the “diverse apparences / Swiche as subtil tregetours pleye” performed by the rather more successful clerk of the *Franklin’s Tale* (1140–1). The claim that the Canon can produce such a marvel is met not with awe, wonder, or even credible tones; rather, the Host proceeds to ridicule the condition of the Canon’s clothing. The worldliness of the Canon’s intent is met with only worldly expectations.

Here in the *Canon’s Yeoman’s Prologue* Chaucer portrays another example of a character within a tale reacting to marvels, but in this instance the verisimilitude of Chaucer’s frame tale obscures the importance of the Host’s intrusion into the Yeoman’s narrative. By greeting the potential wonders to be wrought by the alchemist with the casual disbelief one might expect of a knowing courtier or craftsman among the mechanical monkeys and other wonders of Hesdin or confronting the mechanical angels of London pageantry, the Host offers yet another reading of *mirabilia* suggestive of knowing and negative attitudes toward manmade marvels in Chaucer’s work.⁴⁹ If we “follow the actors” we become aware that Chaucer is discrediting the Canon’s style of alchemical practice through the frame tale.⁵⁰ Here the narratorial level is engaged to discredit alchemy within the story, suggesting that the *Canon’s Yeoman’s Tale* itself is to be an exemplum on the deceptive nature of alchemical marvels.

But the Host does more than read a mundane marvel in the Yeoman’s boast; he also reads into alchemy the negative connotation of deceptive technology, in effect reframing alchemical practice as a dangerous and deliberate fraud. It is the Host’s reaction, not the effect intended by the Yeoman’s boast, which characterizes alchemy throughout the rest of the tale.

It is also with the Host’s reaction to the marvels of alchemy that the rhetoric of the Yeoman begins to favor the host’s perspective on his master’s science: the Yeoman’s perspective—in this tale all that we have of

who the Yeoman is—is transformed to match the Host's. This change is marked by the Yeoman's admission that he holds his lord both "lewed and nyce" (647) for having great knowledge but for misusing it. The Yeoman acknowledges that to many folk it appears that alchemists simply "doon illusion" (673), and offers no evidence contrary to this assumption.

For the balance of the tale, alchemy takes on grave implications for the spiritual and somatic state of the practitioner of this science, the seeker after forbidden knowledge, wielder of the transgressive potential to create that is inherent in alchemy. Linden observes that in Chaucer's work, "alchemy has the human condition as its prime concern, but it is the human condition as touched upon, or 'worked upon,' by recognizable aspects of the theory and practice of the art."⁵¹ In short, Chaucer considers the material aspect of alchemy to be tied to the somatic dangers of *techne*.

The ensuing explanation of the Canon's craft portrays the Yeoman as part of the Canon's laboratory, an adjunct to the technical processes through which the Canon has sought to manipulate nature for gain. Chaucer's story suggests that the transformation is wrought instead upon the Yeoman (720–30):

With this Chanoun I dwelt have seven yeer
 And of his science am I never the neer.
 Al that I had I have lost therby,
 And, God woot, so hath many mo than I.
 Ther I was wont to be right fresshe and gay
 Of clothyng and of oother good array,
 Now may I were an hose upon myn heed;
 And wher my colour was bothe fresshe and reed,
 Now is it wan and of a leded hewe—
 Whoso it useth, soore shal he rewe!—
 And of my swynk yet blered is mine ye.

The operations of alchemy have worked a transformation on the Yeoman, whose fresh youth is worn away to the leaden hues of moral exhaustion. We learn in a narratorial aside that "fumes diverse / Of metals, whiche ye han herd me reherce / Consumed and wasted han my reednesse" (1088–1101). The transformation of metals that is the heart of material alchemy has transformed the body of the practitioner. This transformation is reminiscent of the fall and subsequent degradation of man's material body outside the garden; symbolically it may represent the effects of misused technology on the postlapsarian body, as confirmed by the figural aspect of the Yeoman's proverbial "blered" eye, suggesting he has become misguided.

As if to reinforce the notion of moral decline through somatic transformation, disorder falls upon the practitioner, who desires to relate "many

another thyng / That is unto oure craft apertenynge" (784–85) but cannot, for in his lewdness he may only recite his Rabelasian list of chemical appurtenances without knowing their manner of working, for of "his craft ye may nat wite at me" (621). This disorder is adverse to the order required for the performance of alchemical marvels like that described in the tale's *pars secunda*, and is antithetical to the pursuit of stable bodies, which is the intended outcome of alchemical practice.

This transformation is made possible by an intricate series of operations that have no apparent significance except to obscure the operations of a contrivance designed by the alchemist to deceive (1165–9):

And understondeth that this false gyn
Was nat maad ther, but it was maad bifore;
And othere thynges I shal tellen moore
Hereafterward, whiche that he with him broughte.

Significantly, the Yeoman relates this aspect of the deception to the company, making them privy to the operation of the "false jet" (1277) described as a "holwe stikke" (1265) and used to co-opt a hapless priest into avaricious pursuits. The priest does indeed "stoupe lowe" for Chaucer's *double-entendre* (1311), losing his morals as well as his forty pounds. Thus the deceptive device brought to practical alchemy for the performance of false marvels leads the innocent to sin. Here Chaucer plays upon *gyn* as deceptive in ideation and execution, a clever device that works back upon those who would wield it for morally wrong purposes.

The Yeoman's wild narration is contextualized by the encapsulating statement that the language of philosophers or practitioners of alchemy is so obscurant that "now-a-dayes" no one retains the wit to understand them.⁵² For the company now privy to the nature of alchemical practice, this temporal frame embeds the entire discourse of alchemy in the declining world, where mankind's fresh and distant youth are contrasted with a grim technological present; here is Chaucer's fallen modernity.

Chaucer offers a remedy to man's fallen condition only in the final lines of the work, the so-called retraction of 54 lines in which the notion of a true or spiritual alchemy is raised.⁵³ It is here in the relation of the "spiritual alchemy" that he addresses the complexity of the threat *mirabilia* pose to body and soul, by coming to terms with the combined notions of mechanism, man, and *mirabilia* in his most grave and nuanced reading of what technology has done to man in the fallen world of the fourteenth century.⁵⁴ Only by forgetting the social divisions inherent in the pursuit of multiplication can mankind maintain the course of common profit, for "Ther may no man mercurie mortifie / But it be with his brother knowlechyng" (890–1).

After bringing the company into the harrowing world of soul-endangering alchemical practice, with all its thematic associations with sin and the degradation of the body and the world, the true lesson to be had is related. In a backward-looking admonition from a spent soul—a soul, unlike the Canon's, to be redeemed through pilgrimage—the Yeoman gives the moral (1475–9):

For whoso maketh God his adversarie,
As for to werken any thing in contrarie
Of his wil, certes, never shal he thryve,
Though that he multiplie terme of his lyve.

In the context of the tale's lengthy discourse on alchemical practice and deceptive technological *gyns*, here the vocabulary of *werke* and *thing* indicating an abstract contrariness to God's will takes on a dual emphasis, referring also to the work of things or manipulation of objects. There is a price to pay for such *techne* that cannot be overcome, even if the effort to "multiplie terme of his lyve" so closely associated with alchemical practice should carry the practitioner into modernity itself.

The beginnings of early modern science are in this tale openly subject to examination through its discourses of technology and sin, just as the marvels of the *Squire's Tale* were subject to an analysis of their status as wonders and were found wanting. Here, however, Chaucer employs two narratorial levels, another bifurcated perspective on *mirabilia* in an endlessly propagating series of divergences reminiscent of the impossibility of explaining marvelous particulars: the Host and the Yeoman each offer covert and overt analyses of alchemy, dividing their approaches between the *techne* where Chaucer's source, Vincent of Beauvais, catalogued it, and the soul endangering trickery of false practice.⁵⁵ If we are to believe his early readers, Chaucer knew enough about alchemy to perceive and critique its technological dogma, rendering his ambivalence amid the cultural intersection of technology and sin.⁵⁶

Chaucer seems aware of the importance of perspective in the apprehension of the meaning of marvels, for he treads the line between revelation and secrecy along with his literary *mirabilia*. He does so literally in the case of the *Squire's Tale's* steed of brass, philosophically in the somatic debate of the *Nun's Priest's Tale*, and at the level of the human body in the *Canon's Yeoman's Tale*. In these textual representations of *mirabilia*, suspicion of the imitator of God's creation is introduced, through the creation of a secondary order of creation whose potentially idolatrous origin is in fallen humankind. Alchemy provides an ideal playing surface for these ideas, a surface upon which the notion of surface itself, the elusive space of revealed truth, must be called into question.

Non-spiritual alchemy is both the search for marvelous forbidden knowledge, and the site of misdirected technological development in pursuit of worldly gain, and like manmade *mirabilia* it may change for the worse those who would abuse the manipulation of nature in pursuit of sin. In chapter 4 I follow further the cultural presence of *mirabilia*, similarly enmeshed in discourses on technology, sin, and the body, as John Gower in the *Confessio Amantis* chooses to oppose the measure of Arion with Alexander, whose associations with *mirabilia* need no qualification.

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CHAPTER 4

MONSTROUS BODY POLITIC(S): ALEXANDER IN THE *CONFESSIO AMANTIS*

Secular art does not only embrace romance fantasies of magical statues; it includes political iconography and images that were as pragmatic as posters as vehicles of propaganda.

—Michael Camille, *Gothic Idol*

The Measure of Arion and Alexander's Lust

Mirabilia find purchase in the minds of Ricardian authors in sometimes surprising ways, moving beneath the surface of larger discourses such as the conduct of kingship, common profit, and courtly love. The work of London poet and Chaucer-familiar John Gower appears not to deal in manmade marvels at all, but his choices of matter and approach are affected, like water over submerged contours, by broader cultural perceptions of *mirabilia*. But while the manmade marvels in and around Chaucer's work limn a familiar and oft-times ironic relationship to marvelous technologies, marvels find their way into the works of John Gower through more subtle paths. Their effect, in contrast to Chaucerian multiplicity, ambiguity, irony, and complicity, is in Gower's work part of a focused political allegory in which manmade *mirabilia* associated with regal misrule contribute to the symbolization of flawed kingship and the misdirection of common profit.

As a comfortably wealthy writer living in Southwark, Gower's life in late fourteenth-century London differed from that of his younger contemporary Chaucer, in that he was not a factotum of the Ricardian regime but an independent landowner, and he appears to have had little interaction with the kinds of marvelous courtly experiences Chaucer recycled into his own work. Nevertheless, his poetry shows the effects of the period's growing association between manmade *mirabilia* and the pragmatics of rule.

Although he had written explicitly political works, it was not until later in life that he produced his English masterpiece, the *Confessio Amantis*, at the behest of Richard II himself. In contrast to the political *Tràite* and *Vox Clamantis*, Gower's *Confessio Amantis* has been taken to signal the author's move from overt political allegory into considerations of courtly love. The *Confessio* indeed pursues the love theme, yet when Gower later characterized all of his books in the brief Latin poem, *Quia Unusquisque*, he explicitly drew attention to the *Confessio*'s political purpose within the ambit of his more political works, "bring [ing] instruction to the attention of others." He phrases his description of the *Confessio* to highlight the mutability of worldly kingdoms (*mundi regnorum mutacione*) and the instruction of Alexander, specifically highlighting the Macedonian's rule, for his book

sets out the ages according to the prophecy of Daniel concerning the changes of the kingdoms of the world from the time of King Nabuchodonosor until the present. It also deals with matters that King Alexander was instructed upon according to Aristotle, by Aristotle's own teaching, concerning his own regime and otherwise.¹

This critical focus marrying the mutability of worldly rule and the education of King Alexander highlights a political subtext that begins with the *Prologue*'s key story of peaceful accord brought by the Measure of Arion, and is laced throughout the text, keyed to the personal sins and political failures of King Alexander. That Gower's ideas about *mirabilia* are linked closely to kingship is not in dispute; even in instances where he depicts traditional romance marvels, such as the mirror that Virgil "made of his clergie" to see faraway civic threats, he employs the marvels to exemplify the covitise of kings.²

This chapter traces the composite image of Alexander that Gower compiles as a negative exemplar opposing the positive potential of Arion's measure: in contrast to the musical perfection Arion's music will coax from divine creation, Alexander's lusts force him to pursue, consume, and even create manmade marvels, confirming the technical and moral artifice at the heart of his rule.³ Through the image of a king divided within himself, the *Confessio* reflects a deep awareness of the symbolic conduct of kingship, with Alexander cast as Gower's monstrous exemplar of earthly rule against Arion's potential for regenerative moral action.

Before Gower shifts his narrative compilation onto Alexander, the political allegory underlying the work is personified through the *Prologue*'s harmonious figure of Arion, whose measured tones tamed wild beasts, including a dolphin who saved him from pirates.⁴ And indeed, the search

for a new Arion to provide measure to a divided English polity provides Gower's positive exemplar of earthly rule (CA.Prol. 1065–9; 1072–5):

He broughte hem alle in good accord;
 So that the comun with the lord,
 And the lord with the comun also,
 He sette in love in bothe tuo
 And putte away melancolie.

And if ther were such on now,
 Which cowthe harpe as he tho ded,
 He myhte availe in many a stede
 To make pes wher now is hate

Here Gower replaces the pastoral imagery of his Ovidian source with human accord and emotion to suggest the political stakes of correct earthly rule, a subject with which Gower would contend directly in the rededication of his great English poem.

The first recension of the *Confessio* has been dated to 1390 on the basis of two marginal notes, but Anne Astell has argued on the basis of the underlying political allegory for a date after Christmas 1391, when all of London experienced a marvel. The populace was wonderstruck by the marvel of a dolphin's appearance in the Thames, inspiring Gower to use the image of Arion and moving all three recensions into 1392–93.⁵ The main distinction is Gower's later omission of his early manuscripts' dedication, narrating an encounter with Richard II on the Thames, during which the king asked Gower to write the *Confessio*.⁶ The change in dedication would effectively elide Richard's potential role as a new Arion; before he changed it, the original dedication imagined the work as (CA.Prol. 23–7):

A bok for king Richardes sake,
 To whom bilongeth my ligeance
 With al myn hertes obeissance
 In al that evere a liege man
 Unto his king may do or can

This dedication underscores the unifying role of proper kingship in accord with the allegory of Arion, connecting the city on the Thames, the King, and political harmony. The lines were replaced in 1392–93 with a distinct sense of worldly decay linked to the conduct of kingship (CA.Prol. 24–32):

A bok for Engelandes sake,
 The yer sextenthe of kyng Richard.

What schal befall hierafterward
 God wot, for now upon this tyde
 Men se the world on every side
 In sundry wyse so diuersed,
 That it welnyh stant al reversed,
 As forto speke of tyme ago.

In replacing the contact between poet and lord with an image of *senectus mundi* or the world grown old, Gower invokes the image of decay in the context of a rule conducted “thurgh tirannie and cruelte” (l.49), likening youthful kingship with dissolution and division, and forging a thematic bond between the still-young Richard and the flawed, youthful kingship of Alexander. The matter of Alexander will deeply influence the overall structure of the *Confessio*. Book 7, formerly a meditation in the *mirror for princes* style alluding to Richard’s rule, takes on the quality of an extended estates piece through the poet’s rededication “for Engelondes sake.” Gower’s enlarged scale of address, especially within the greater ambit provided by his encyclopedic compilation, harnesses Alexander to an historical scope far exceeding the politically localized Alexander narratives of Chaucer and others.⁷

Whatever a particular recension’s political stance, Gower presents a greater political commentary by using Alexander as an avatar of modern kingship, a cautionary persona whose sins, documented and even visualized by writers over the previous century, offer the dedicatee the terrible cautionary image of a ruler whose lusts, or *concupiscentia oculorum*, desired marvels beyond moderation, and who ultimately was punished for those sins with death and torment.⁸ The Ricardian court’s extravagant culture of magnificent spectacle employed in the interest of absolutist ideology must have seemed to Gower a grim harbinger, a mark plotting Richard’s downfall and implicating Alexander’s pursuit of marvels in the complex of sins for which wrong rule is ended by divine justice. That his own literary endeavors were perhaps underwritten in some sense through an affinity with expanded arts patronage under the Ricardian regime would hardly seem a contradiction to a writer with the restorative intentions of “moral Gower” and his unswerving focus on common profit.

The images of Alexander the Great chosen by Gower correspond to the ideological ends pursued through courtly splendor and personal display by Richard II, providing matter for a critique of courtly magnificence and absolutist rule correlating with Gower’s political sensibilities, and also played out in the rededication of the *Confessio*. The result is a powerful critique of Richard’s conduct of kingship, likely spurred by the king’s investment in the production and consumption of courtly display. If, as Astell

claims, the political allegory inspired by the wondrous appearance of the marvelous dolphin indeed dates the poem to 1392–93, then Gower likely also responds to manmade wonders such as the extravagant range of marvelous pageantry displayed from the coronation in 1377, and more recently demanded by Richard as part of the City of London's reconciliation, staged in 1392.⁹ Gower appears to have taken this magnificent performance of marvelous pageantry as confirmation of Richard's growing absolutist tendencies, and the abandonment of the accord personified by Arion.¹⁰

In our post-Renaissance view, Alexander appears as a heroic figure, either the handsomely chiseled, black-haired youth of the classical tradition or the bearded veteran derived from the romance-based tradition of the Nine Worthies. Chaucer laments the loss of this Alexander in the *Monk's Tale* (CT.VII.2656–9):

Philippe's sone of Macidoyne he was,
That first was kyng in grece the contree.
O worthy, gentil Alisandre, allas,
That evere sholde fallen swich a cas!

Chaucer's characterization reinforces the tragedy of the meritorious monarch of good parentage fallen through treachery, as his Plantagenet affiliations demanded.

Yet there is another powerful medieval Alexander, one portrayed during the fourteenth century even more frequently than the classical figure. This representation is particularly developed in the moralized Alexander of many literary works, such as Gower's *Confessio* or Lydgate's *Fall of Princes*, in which the moral is compounded through allusion to Alexander's ethical and moral failures. It is this tradition that stands behind Gower's choices of Alexander material in the *Confessio*.

Gower's sources for the *Confessio's* Alexander material often render the youthful Macedonian as monstrous as the fabulous beasts he encounters in his inexorable drive toward the east.¹¹ This flawed Alexander is the personification of all the traditional associations with misrule, *mirabilia*, and sin that portray the young king as ravenous, consuming all the world in an orgy of destruction, and leaving in his aftermath a series of monuments and cities idolatrously constructed in his own imperfect image. Staring out with monstrous eyes upon a marvelous eastern landscape he is compelled to consume and reconstruct in a frenzy of lust and idolatry, his singular desire embodies aspects of the as yet unsanctified prerogatives of absolutism practiced by Richard and his contemporaries. Alexander's moral failure is in ignoring the corporate good to indulge and emphasize his flawed self. In this tradition, he is conflicted at birth through his very parentage: he is not

king Philip's son but the product of a union between a magician overcome by lust and a queen deluded by sorcery. Gower's concern over social and moral division finds in Alexander the personification of sin, misrule, marvels, and misguided progress.

In the rest of this chapter I discuss the divided Alexander that Gower draws upon throughout the *Confessio*, as the poet uses Alexander's monstrous body as a symbol for humankind in passages rife with magic and science, revealing through this usage a submerged but culturally significant anxiety over the Augustinian notion of prosthesis—the attempt to recover man's fallen body through technology, and the manmade marvels through which technology leads Alexander further astray.¹²

Gower's Alexander

The sheer ubiquity and variety of Alexander material then in circulation provided Gower with an ideal political analogue, for as Chaucer states in the Monk's Tale (CT.VII.2631–3):

The storie of Alisaundre is so commune
That every wight that hath discrecioun
Hath herd somewhat or al of his fortune.

This epigraph has been described wryly by Alexander the Great scholar George Cary as “those famous lines upon which every writer upon the medieval Alexander feels tempted to put upon his title-page,” suggesting that to modern scholars, Alexander's character is as thoroughly well known as it was to medieval writers.¹³ Here Cary and Chaucer both touch upon a truth confirmed in Gower's *Confessio Amantis*: that all discerning contemporaries know something of Alexander. But if today we have a rather singular idea of the classical king, based upon images of the youthful, black-haired conqueror or the bearded pagan ruler of the Nine Worthies, for Chaucer's discerning contemporaries there are a number of Alexanders from which to choose.¹⁴

Alexander became many things in his textual afterlife, cast as a different character depending upon the ideologies of those who remembered him. Plato made him a philosopher-king; the rationalist Stoics lamented his uncontrolled descent from reason into lust and passion; the democratic Greeks imagined him a tyrant; and the subsequent centuries saw this multifaceted figure morph into a mad pursuer of marvels, a monster-killer, and finally a monster himself.¹⁵ These various Alexanders have been characterized by one recent scholar through the dichotomy of “Alexander the Beatified or Alexander the Beast.”¹⁶ Chaucer's heroic Alexander, portrayed

in the *Monk's Tale* and elsewhere, is altogether different from the one Gower selects for his composite image of kingship in the *Confessio Amantis*. Gower instead offers the morally ambivalent Alexander of Augustine and Dante, a ruler compromised by lust and unreason, born of a monstrous union, a seeker after marvels who is unable to grasp his mortal limitations or to tame his lusts.¹⁷ Gower's Alexander represents the division, sin, and monstrousness of an earthly king ungoverned by reason. Like many of his peers, Gower read of Alexander "not just for marvels," but for the meditation it provided on "the sources of vernacular authority."¹⁸

As part of the moral program of the *Confessio Amantis*, Gower admits *mirabilia* through the ever-present associations between both natural and man-made marvels, and King Alexander. Through his choice of sources and through his own narrative, in which Alexander is born amid magic and wonders, these converging subjects form the basis of Gower's critique of kingship culminating in Book 7. Emergent fourteenth-century notions of *mirabilia* serve an adjunct role in the moral program established in his *Prologue* and carried through the *Confessio*, where Gower's at first fragmented idea of *mirabilia* unifies through Alexander into a thematic device, employing the monstrous and marvelous in a symbolic vocabulary describing the divided state of humankind embodied first in the statue in Nebuchadnezzar's dream, and most notably in the monstrous, divided persona of King Alexander. This ambivalent Alexander serves a vital function in the text, bridging the crux or seeming break between Books 6 and 7, but the marvelous Alexander of Gower's sources is here examined for what his presence in the *Confessio* reveals about contemporary attitudes toward *mirabilia*, science, and politics. The playful ambivalence characterizing Chaucer's approaches to the technical innovations of manmade *mirabilia* in poems such as the *Franklin's Tale* and the *Squire's Tale* takes a darker turn in the *Confessio*, where these manmade wonders represent only man's worldly decline.

Gower sets the stage with mankind's plight in the *Prologue*, where his marvelous image of Nebuchadnezzar's dream invokes the decline of the world in the scope of Christian redemption history. The statue in the dream lies opposite of Arion, and symbolizes the downward progress through time since humankind first fell into its divided and weakened worldly estate.¹⁹ Significantly, the narrator of Nebuchadnezzar's dream is not Daniel, as in the biblical story, but the king of Babylon, whose displacement of the prophet places the king and the staged statue "at the center of a *theatrum mundi*."²⁰ And although it pushes the bounds of Gowerian propriety to suggest that the poet's placement of this statue literally on a stage (Prol.651) might offer comment on the theatrical aspects of the 1392 reconciliation or pageant or other contemporary examples of

automated statuary, the simple effort of representing the dream-figure as pedestal-mounted statuary strongly implicates artistic craft.

The significance of craft and manmade marvels is made explicit through the metal animals, flying machines, undersea devices, and other manmade *mirabilia* in Gower's Alexander sources, but surfaces in the *Confessio* only as an accretion of images during the gradual realization of Gower's moral program. Among the many tales compiled for the narrative, Gower repeatedly deploys negative exemplars of Alexander the Great. In the stories of Alexander and Diogenes (CA.3.1201–330), Alexander and the Pirate (CA.3.2363–437), the Wars and Death of Alexander (3.2438–80), and the birth of Alexander (6.2271–6), we see only negative exemplars, such as the pirate's charge—apparently confirmed by Dante—that Alexander is merely a pirate on a greater scale. Even at his best we see a negatively shaded ambivalence, as when Alexander oversteps by offering Diogenes a boon, only to be asked to stop blocking the philosopher's sunlight. I will say more on his birth later, but even in his death narrative, an account of the ruler “deceived, / and with strong poison envenomed” (3.2456–7) we find “the tensions inevitable in *de casibus* accounts of Alexander that have to trade on his *worldly prestige*” for their moral.²¹

The text is finally marked by a crux in the shift from Book 6 to Book 7, as the future monarch's marvelous birth narrative leads to Amans's request to hear of the proto-scientific education of Alexander, and here the matter of Alexander's education apparently displaces the structural form of the seven deadly sins. (CA.6.16–9):

For be reson I wolde wene
That if I herde of thinges strange,
Yit for a time it sholde change
Mi peine, and lisse me somediel.

Here Amans, having decided to renounce sorcery, nevertheless misses the big picture, performing the very misunderstanding of the application of *curiositas* with which Gower is concerned in Book 6, his ignorance playing out a clever symbolic subversion of the poem's narrative framework of the seven deadly sins. Amans, like Gower's readers, here associates the education of Alexander with contemporary reportage on the marvels of the fantastic East: the choice of wording in Amans's request for the solace of “thinges strange” is an admission of curiosity. In the transition between Book 6 and Book 7, during which the reader is forced to confront his own implication in the matter of *curiositas*, lies the marvelous body of Alexander. As the greatest of earthly monarchs, he is equated with the likes of Chaucer's Squire's ideal pagan, Cambyuskan, only three lines previous for

exemplifying “al that to a king belongeth.” Alexander in Gower’s *Confessio* represents an ambivalent symbolic representative of earthly kingship.

The Tail of Nectanabus

It is in the birth narrative in *Confessio* 6 that Alexander’s marvelous characteristics are alluded to and established, and the marvelous—through the monsters he encounters, the fantastic inventions he employs, or the traditional eastern wonders he catalogues—is deeply associated with King Alexander in the manuscript tradition of the sources Gower employs. This cultural link between the marvelous and Alexander is founded on his affiliation with monsters such as his steed Bucephalus, his encounters with the many wonders of the east, and especially through his frenetic use of marvelous technological devices in the episodes leading to his death. Even the body of the king himself is depicted in marvelous terms, as the symbolic aspects of the Alexander legend precipitate into concrete imagery, becoming monstrous physical characteristics, the most notable of which are his mismatched, parti-colored eyes. The symbols associated with the young Alexander are often rendered as actual monstrous physical traits, the physiognomic symbology of the literary *Secretum* tradition literally inscribing monstrosity onto the king’s body.

Gower presents the megalomaniacal offspring of the lecherous wizard Nectanabus and a deceived queen in a context guaranteed to spark associations between Augustinian redemption history, the sins of man, and earthly rule. Gower opens Book 6 with an epigraph on the prior nature of Gluttony:

Est gula que nostrum maculauit prima parentem,
Ex vetito pomo, quo dolet omnis homo.

It is Gluttony which stained our parents first,
Through that forbidden fruit, our sorrow’s root.²²

Gluttony, significant as the subject through which Gower chooses to narrate Alexander’s crucial and monstrous birth narrative, can be thought of as a relatively minor mortal transgression but for the tendency it has to lead to the more serious sins, if one can shade mortal sins in that way.²³ Certainly it is the sin most closely entwined with both the Pride for which Alexander was known, and the general perception of problems with Richard’s rule during Gower’s time writing the *Confessio*, as King Richard’s Wardrobe expenditures on magnificent artistic goods reached historic heights, beggaring coffers formerly dedicated to the more traditional military efforts associated with rule before the doctrine of magnificence.²⁴

It is no wonder then that the conditions of this imperfect king's birth would appear under the rubric of Gluttony, compounding the sin's associations with the Fall: Alexander's monstrous body in the *Confessio* is nothing less than Gower's symbolic representative of the problematic Ricardian kingship, a multivalent embodiment both of the generally degraded state of humankind, and of the unstable governance threatening the traditional mode of kingship that many Ricardian authors are so quick to defend or recoup. This is in keeping with another popular literary tradition from which Gower takes some of his Alexander material, for the young king often appeared as an archetype of immorality in the contemporary *exempla*.²⁵

Alexander in Gower's schema represents *curiositas*, the sin of the eyes which leads to still graver sins. The moral is realized in the narrative not only through the actions of Nectanabus, but also through cultural associations with Alexander's monstrous gaze, which ravenously consumes. His parti-colored eyes will be developed as the physical manifestation of the sins for which Gower portrays his birth in *Confessio* 6. The strong cultural presence of Alexander's marvelous birth and monstrous aspect are used symbolically to suggest the worldly estate of man in Gower's *Confessio Amantis*, in which Alexander the *curiosus* comes to function as the symbol of a monstrously divided humankind.

In *Confessio Amantis* 6, Gower directly references the key texts from the Pseudo-Callisthenes or romance manuscript tradition for his Nectanabus segment. There, from birth the young Alexander is a potent and marvelous figure, well represented in Gower's Latin and Anglo-Norman sources as well as contemporary English works such as Trevisa's translation of Ranulph Higden's *Polychronicon*, Vincent of Beauvais's Latin *Historia*, the works of Peter Comestor, and others.²⁶ In the *Wars of Alexander*, an early fifteenth-century English translation of the *Historia de preliis*, Alexander appears much as he does in Gower's Latin source, the *Historia de preliis* (*Wars*, 601–8):²⁷

With grete glesenand eȝen grymly he lokis,
 Ðat ware as blyckenand briȝt as blesand sternes,
 ȝit ware þei sett vnsamen of serelypy hewys;
 Ðe tane to brene at a blisch as blak as cole,
 As any ȝare ȝeten gold ȝalow was þe tothire.
 And he wald-eȝed was as þe writ schewys,
 ȝit it tellis me þis tale þe tethe in his hede
 Was as bitand breme as any bare tuskis.

Alexander's shock of manelike hair and his tusklike teeth bespeak the monster within, staring out through gluttonous eyes "sett vnsamen," one black, the other golden. In the textual imagination of later medieval Europe, Alexander's

very body is monstrous. His towering historical persona is rendered not through mimesis or even reference to our familiar classical portraits, but rather reimagined through an accretion of symbolic associations that are themselves at times contradictory, united only as divisions of a hybrid constitution.

How monstrous is this signifying body in Gower's culture? So monstrous that his father is often portrayed as a dragon, having changed form to seduce Alexander's mother. Gower establishes Alexander's lineage and birth in this pivotal sequence in the *Confessio's* book on gluttony. Alexander's monstrousness begins with his father, Nectanabus, in the imagery in Book 6 leading to the conception of the boy who would be king of all the known world. In the magic- and science-laden story of Nectanabus, the magician lusts after Olympias, Philip of Macedon's wife, his gluttony forcing him to seduce her by magically turning himself into a dragon in a perverse analogue of the Annuciation.²⁸ Nectanabus speaks to Olympias about the immanent conception (CA.6.1904–21):

Ma dame, bot a while ago,
 Wher I was in Egipte tho,
 And radde in scole of this science,
 It fell into mi conscience
 That I unto the temple wente,
 And ther with al myn hole entente
 As I mi sacrifice dede,
 On of the goddes hath me bede
 That I you warne prively,
 So that ye make you redy,
 And that ye be nothing agast;
 For he such love hath to you cast,
 That ye schul ben his oghne diere,
 And he schal be your beddefiere,
 Til ye conceive and be with childe.'
 And with that word sche wax al mylde,
 And somdel red becam for schame,
 And axeth him that goddes name,
 Which so wol don hire compainie.

Having come to Olympias announcing that she would bear a child, the sorcerer surreptitiously reappears as a dragon to father Alexander (CA.6.2058–66):

The nyht com, and the chambre is weyved,
 Nectanabus hath take his place,
 And whan he sih the time and space,
 Thurgh the deceipte of his magique

He putte him out of mannes like,
 And of a dragoun tok the forme,
 As he which wolde him al conforme
 To that sche sih in swevene er this;
 And thus to chambre come he is.

Here Nectanabus transforms himself “out of mannes like” and into a dragon’s form. There is the suggestion that the transformation is more monstrous than simply a change of form in the assertion that he “wolde him al conforme” to the marvelous beast.

Popular visual imagery of the magician further confirms the medieval belief in Nectanabus’s monstrous makeup. Medieval images of Nectanabus fathering Alexander represent the magician as a dragon, reinforcing Gower’s contemporary perspective on Alexander’s monstrous lineage, a heritage emphasized throughout the Pseudo-Calisthenes tradition of the Alexander romances.²⁹ This close association with the monstrous deeply influenced the dominant popular imagery of the siring of the young king in illustrations, as in this typical specimen showing a naked Olympias accepting the monstrous creature with open arms (see figure 4.1).³⁰



Figure 4.1 The conception of Alexander, from the *Miroir Historiale*, MS.Bn.Fr.50, fol.22v (image courtesy of the Bibliothèque nationale de France)

Nectanabus in the illustrators' imagination is always associated with dragons, as is evident in the wealth of period depictions featuring the magician. Medieval notions of patriarchy and blood heritage imply that his son carries connotations of monstrosity in his very conception, and this tradition dominated popular ideas about Alexander's fundamental character until the very end of the Middle Ages.³¹ Not until 1468 was the classical Alexander tradition reasserted as the dominant portrayal of the young king, although even in such early humanist endeavors, anxiety over the monstrous birth idea persisted. Vasco da Lucena translated Quintus Curtius Rufus's *Historiae Alexandri Magni* into French as *les fais d'Alexandre le grant* in that year. Only with the wide availability of the vernacular version did the classical model of Alexander supersede the monstrous one. Yet even in the later fifteenth century, Vasco wrestles with the notion of Alexander as a monster; the dragon accompanying the birth scene in the text's Getty MS is treated in Book I, in which Vasco discusses much of the birth legend, eventually rejecting the Romance idea of Nectanabus as Alexander's true father. Thus even in a late text seeking to recuperate Alexander as an historical king, rather than a legendary figure of romance, the author is compelled to address the idea of Alexander as a monster, even as he rejects the Romance version as "false and impossible."³² Thus in another typical scene from a fourteenth-century MS we see Nectanabus, Alexander's true father, in a dream-image associated with Philip's patrilineal anxieties (see figure 4.2).



Figure 4.2 Philip's patrimonial dream, from the *Miroir Historiale*, MS.BN.Fr.50, fol.22v (image courtesy of the Bibliothèque nationale de France)

Here the illuminator chose to stress the monstrous associations with Alexander's true father. In emphasizing this story in his tale illustrating the sin of gluttony, Gower is later able to capitalize on these marvelous associations with Alexander's prodigious birth. The child of the dragon is born to thunder, shattering rocks and the dimming of the sun, marvelous events foreshadowing his greatness even as they reinforce Alexander's nature as a prodigy. Philip had already witnessed a related marvel in the egg that hatched a baby dragon symbolizing Alexander (6.2219–47). The child of this marvelous birth is a mental prodigy fit to study with Aristotle, and the education in the sciences that completes the makeup of Alexander is treated in some detail in the seventh book of Gower's *Confessio*. Alexander himself is the crucial link between these books, as I shall later discuss. In Book 6, however, Gower's concern is to establish Alexander's lineage, and here he offers only brief reference to the future of the greatest of classical occidental kings.

The structural importance of Gower's emphasis on Alexander can be inferred from attention to his sources. By referencing Alexander, Gower brings to his text not only words, but the symbolism and traditions woven through his culture. In his Anglo-Norman source, Thomas of Kent's enormously influential twelfth-century *Roman de toute chevalerie*, Nectanabus fathers Alexander through deceit; Thomas's Nectanabus is clearly a man, albeit one morally transformed by sins associated in the later Middle Ages with the use of magic. Gower focuses his own account on natural magic, the shape-changing abilities of the magus, and Gower's conception.

Whether we take the devious magician's intent to conform wholly to the dragon shape literally, in Gower's source texts the idea of hybridity still follows Alexander. For example, in Thomas of Kent's *Roman*, as Olympias strives to hold back her immanent delivery, she asks for the propitious time to give birth. Nectanabus says to her, "Please. Now is even worse. If he is born now he will be half hog and half man."³³ In similar texts from this tradition, such as Gower's probable source, *Res gestae Alexandri Macedonis*, the birth is delayed lest Alexander be born a different sort of hybrid:

Nunc etiam, quaeso, duraveris paululum, quippe si editu
victa is, gallus et semivir erit, qui nascetur.

Now also, I beg you, endure a while longer, for if you deliver
now, your son will be a eunuch, a half-man. (135)

In each case, whether literal or figural, hybridity is a form of monstrosity in the Alexander narrative. The danger of birthing such a hybrid speaks to

the type of prodigy—Alexander—that eventually will be born to Olympias when the signs are correct. The appearance of this potential in Alexander's birth narrative may also echo or encapsulate the traditional arc of his life, the end of which is presaged through yet another reference to monstrous hybridity. Another of Gower's sources, the *Historia de Preliis*, foretells Alexander's death through the birth of a monstrous child he fathers in Babylon. True to the symbolic hybridity associated with all birth narratives involving Alexander's lineage, its upper half is delivered dead:

Et cum esset Alexander Babylonia, peperit quedam mulier ex eo filium qui a capite usque ad umbilicum habebat similitudinem hominis et erat mortuus, ab umbilico autem usque ad pedes similitudinem diversarum bestiarum at erat vivus.

When Alexander was in Babylon a woman gave birth to a son by him. From its head down to its navel the child resembled a human being and was dead, but from its navel down to its feet it resembled a variety of beasts and was alive.³⁴

In the manuscript tradition shared by Gower and his sources, the conqueror's ability to engender a monster, a moral exemplar of his sins and a literal composite of life and death, is a forceful reference to the monstrous hybridity inherent in the young king. The marvelously divided lifeblood of Alexander's body is one of the prevalent characteristics of the Alexander texts available to Gower, and could not likely appear in Gower's text without importing close associations between the Macedonian king and the fraught kingship of England under Richard.

In a typical Gowerian referencing pattern, in which our "burel clerk" or compiler expects his references to spark associations in the reader, Gower's *Confessio* does not dwell on the monstrous elements of Alexander's birth, perhaps because of the overwhelming cultural weight of symbolic associations that in the fourteenth century attended any inclusion of the Nectanabus story.³⁵ In the material related to Alexander then circulating in England, the birth and Alexander's monstrous heritage was closely associated with both marvelous and monstrous *mirabilia*, and these forms invoked symbolic links to Alexander's body itself.

Alexander's Marvelous Body and Sinful Gaze

Alexander's half-monstrous lineage manifests itself through his physical traits as well, such as his own ability to engender hybrids and his mismatched

eyes—symbolic traits persisting in Gower's sources even when the physical description is not overtly monstrous. Alexander's eyes have a special significance for Gower's text, highlighted by the structural placement of his birth narrative in the *Confessio*. Alexander's gaze represents *concupiscentia oculorum*, the sin of the eyes, the presence of which contributes to Gower's use of Alexander in this critical part of the work. Alexander's eyes are the part of his body most important in the source tradition, implicating the consumption and production of *mirabilia* through their sinful gaze.

Thomas of Kent's description of the newly born Alexander's appearance is not that of a prodigy, as in the *Wars*, but even here Alexander's eyes betray his marvelous nature:

Bloi peil avoit e crep, gros oil e vair le destre/ E come leonine aveit neir l'oil senestre.

He had curly blond hair and large eyes. The right eye was green, and, as if to complement it, the left eye was black.³⁶

This account echoes that in Julius Valerius's *Res gestae Alexandri Macedonis*. There his eyes are described, "oculis egregii decoris, altero admodum nigra quasi pupilla est, laevo vero glauca atque coeli similis" ("beautiful eyes, the right pupil black and the left one blue-grey like the sky").³⁷ It might at first appear that these texts, and also most graphic representations of Alexander, partake of the classical portrait, but such an assessment ignores the symbolic force of the textual descriptions where the body's symbolism manifests in Alexander's character—a character whose qualities are to be divined according to the very sciences, including physiognomic diagnosis, displayed in the section on the wisdom of Alexander in Book 7.

The *Secretum secretorum*, a work in the "education of Alexander" tradition familiar to Gower, brings the body and its symbols together in a typical medieval fashion: through physiognomic diagnosis, guaranteeing that Alexander's monstrous associations are not so easily shaken. In the section "Of eyen moche shakynge" (97) in the early fifteenth-century Ashmole MS occurs the following passage (1–7):

Eyen of moderat magnytude and clere sheweth goodnesse and grete doynge, and of grete þoughtis perfeccion, natheless somwhile wrathfull, vinolent, and covetyng glory aboue oþer men. Some seiþ kyng Alexander had such eyen. Oþers seyn nay, but þat he had an eye parted with rede and grey.

In addition to the significant association here between magnificence and covitise, whatever color we take Alexander's eyes to be, the symbolism of their humoral associations in later medieval English culture returns us to Alexander's divided character. The divided eye of red and gray noted earlier suggests reference to the passage on red eyes elsewhere in the *Secretum* (103):

Eyen as rede as fire, it sheweth a bad man and an obstinate. And yf eyen be rede, it sheweth strength, hardynesse, and myght to the haver.

The gray eye is also compatible with the Alexander tradition, indicating a range of positive characteristics while nevertheless reinforcing the idea of a divided constitution.

Similarly, Gower need not have mentioned the commonplace that this greatest of earthly kings carried the symbolic weight of mankind's sins in his face. Alexander's monstrous eyes were always symbolic of the sins for which he stood, appearing, for example, in Peter Comestor's *Historia scholastica*, in a commentary on Daniel 8:15:

"Et ecce hircus ueniebat ab occidente, et non tangebatur terram." Hic est Alexander quasi uolans, per insinua queque gradiens, ut hircus, ut ab hircis oculorum, quod diuersi coloris habuit.

And now the he-goat was come from the west, and did not touch the earth as it came. It is Alexander going here and there as if flying, and indeed, like a goat, displaying eyes of diverse colors.³⁸

Here the biblical symbolism of the he-goat from the book of Daniel manifests in the work of the medieval author as the physical appearance of the young king, once again linking the physical symbology of the king's body with the notion of earthly sin. The goat-like aspect of Alexander in Peter Comestor suggests that Alexander is the unwitting tool of God even in his sins, just as in the later medieval texts Alexander's eyes only consume and destroy, having become the symbol of self-destructive division in an otherwise virtuous king.

Alexander's eyes in this tradition function symbolically as the expression of his desire; whatever he sees, he must conquer. As he moves east across the earth, conquering, destroying, and rebuilding, Alexander is drawn forth always by his eyes and the sins they represent. This negative image of an insatiable Alexander prevails throughout the later medieval romance tradition, and underlies the textual references to Alexander incorporating Gower's Nectanabus story. The Alexander of the *Confessio* signifies beyond

the limits of Gower's text. His presence is a physical realization of the lusts that engendered him, which lead directly to the errors of kingship that Gower addresses throughout the *Confessio*.

The desire of the eyes that draws the peripatetic conqueror onward bridges the exegetical and symbolic associations comprising the monstrous medieval Alexander. Peter Comestor's description of Alexander's goat-like, multicolored eyes recalls St. Jerome's interpretation in *Commentarium in Danielum* of the he-goat of Daniel, said to symbolize Alexander as the unwitting instrument of God in defeating Darius.³⁹ Alexander's eyes always represent the unbridled drive to consume, to conquer, moving forward across the earth.

In fact, in many of the Alexander stories with which Gower was familiar, sin is symbolically expressed through reference to Alexander's eyes. In the widely known tradition of the *Iter ad Paradisum*, Alexander comes to the very gates of the terrestrial Paradise, demanding entry. There he is denied, but receives a magical stone engraved with an eye as a token of the divine wish that he control the insatiable drives fed by his ocular desire.⁴⁰ In other episodes among Gower's familiar sources, the notion of Alexander's eyes links sin to technology, and this implication of Alexander's character raises one of the primary aspects of division Chaucer raised in *The Former Age*: like Chaucer's self-consciously ironic narrator, Alexander is often found wanting for his reliance on technology and the sciences, whether the associations between the sciences and sin are made explicit, as in the scene of Nectanabus's death or Alexander's well-known aerial and undersea adventures undertaken in manmade marvels of wondrous contrivance, or in more subtly symbolic forms among Gower's reading, including the verbal exchange with the antitechnological gymnosophae, or Peter Comestor's allusive reference to the young ruler's flight.

In the following section, I want to pursue the notion of Alexander's sinful eyes as a concrete symbol of his marvelous technological and scientific affiliations. Alexander's associations with and reliance upon technical marvels suggests that this greatest and yet most flawed of earthly kings founded one of his major flaws on what I shall characterize as a perverted form of "prosthesis" in which Alexander's uses of technology place him beyond the acceptable realm of "mankind the toolmaker" as laid out in the section on good labor in *Confessio* 4. There, in a chapter concerned with transformation and riddled with powerful stories from the history of manmade *mirabilia* such as Grosseteste's brazen automaton head (4.234–43), Pygmalion's idolatrous statue (4.371–436), and the misbegotten efforts of Phaeton and Icarus (4.979–1071), we see a clear division between the salutary and immoral uses of technology.

Alexander, Sin, and Prosthesis

From his birth to his marvelous appearance, from his monstrous eyes to his gluttonous need to fulfill their desire, Alexander exhibits a driving need to go beyond even his own heroic capabilities. He often does so through prostheses, mechanical aids to the fallen body.

The idea of prosthesis in the Alexander legend is a complex one, too great to be dealt with in its entirety here.⁴¹ Prosthesis has been described variously, but for present purposes it constitutes a fabricated extension of the human body, whether integral or attached. Thus a shovel and a lens each could be termed prosthetic in this sense. Even a simple mirror, considered as an object through which one realizes selfhood, could qualify in the broadest sense of the word. But the legend of Alexander behind Gower's *Confessio* demonstrates a concise idea of prosthesis that engages the very sins that are Gower's concern. Alexander's prostheses integrate with the Augustinian notion of human progress outlined in chapter 1.

Alexander is a hero characterized by sin. The *concupiscentia oculorum*, or sins of the eyes, which drive him forth coalesce in Alexander narratives into actual physical characteristics. In his efforts to feed the sins of his eyes, Alexander constructs and employs a wealth of marvels of a singularly technological or scientific character: instead of directly employing the monsters and magic all around him, Alexander mediates his own experience of *mirabilia* through technology. He builds copper men full of coals, constructs glittering undersea-viewing apparatuses and wonderful flying machines. In these significant cases, among others, Alexander realizes progress only by using machines; Alexander's selfhood is managed through the use of technological artifice, and cannot move forth to sin further without such marvelous prostheses. This idea pervades the Alexander *legenda*, becoming in Gower's time an unstable site of contention among discourses of the marvelous, science, and technology.

Advances in the forms of inquiry that would inaugurate the early modern sciences had by this period destabilized the psychology of wonder upon which figures such as Alexander were held aloft. Revealed for what he was, Alexander's monstrous characteristics surfaced and he became a suspect marvel in himself. Gower picks up on this aspect of Alexander in the crucial period before the culture would reorient the hero, pacifying his technological demons by reasserting the dominance of the classical hero, effectively discarding the fantastic hero of the romances. Gower moralizes this hero in terms of the sins he commits through prosthesis, by associating him with marvels, magic, and science.

This prosthetic Alexander, who cannot operate as Alexander without technical contrivances, appears to be the classical hero, a great man with a

great mind. However, when this fantasy disintegrates, when the man is exposed through his misapplication of technology, what remains is the monster that medieval texts make him due to his use of prostheses in the commission of sin: the fair hair and sharp eyes become monstrous, the teeth tusklike, the strong voice a horrible roar. Alexander, representative of humankind's failure to perceive its own implication in the continuing worldly decline of the *senectus mundi*, is revealed as the typological cousin to Cain, the first link between sin and technology.

The association Gower develops between Alexander and the sciences in the *Confessio Amantis* resonates with the emphasis on technical marvels in the popular Alexander stories. In the romance texts Gower favored for his Alexander sources, the cultural weight of the symbolism behind the repeated Alexander imagery associates sin and technology at every turn. In these source-texts—even at the limit of the horizon beyond paradise, where Alexander's desiring eyes can see no further than where the sea meets the sky—it is his desire and its connection with *mirabilia* both monstrous and technological that drive him to his ultimate attempts to conquer the world. The primary image of Alexander in Gower's tradition is of a man who will go to any lengths, sacrificing morality by using technology to further his sinful ends, an absolutist figure consonant with the rapidly consolidating politics of absolutism and personal rule practiced by Richard II in the last decade of his rule.

The desire Gower exploits in the *Confessio* motivates two major episodes within the traditional material on Alexander, both of which are symbolically linked to the idea of prosthesis, extending the power of his sinful eyes. In most texts of the romance manuscript tradition, the king's final adventures take place on the shore beyond the terrestrial paradise, and each highlights the redoubled perversion of the prosthetic eye in his driven attempt to admit the whole of the earth through his sinful gaze, in a perverse recapitulation of the eye of the divine.⁴² It is from episodes such as these that Gower exploits the moral faults of Alexander to create a subtle parallel with Richard's rule. The technical crafts of mankind, approved and catalogued in *Confessio* Book 4 as part of a measured response to mankind's postlapsarian condition, are here extended, made into perverted prosthetics employed by Alexander in transgressions against the divine.

In his aerial and undersea adventures, Alexander employs human artifice, reinforcing associations between his misguided kingship and the marvelous contrivances by developing amazing machines in a vain attempt to overcome the limits of his physical body. His purpose in doing so is simply to satisfy his desire to experience more *mirabilia*, in the hope of satiating his incessant *curiositas*.

In the first of these episodes, Alexander wishes to climb into the sky, following the path of his gaze beyond reasonable human limitations. In the

early fifteenth-century *Wars* translation of the Latin *Historia*, the episode is rendered thus (*Wars* 5511–4):

Dare was a miȝti montayne at to þe mone it semed,
 He gessis it gaynir to god þan to þe grounde vndire,
 And slike a fonned fantasy þan fell in his hert,
 How þat he lifted miȝt be fra þe lawe vnto þe liȝt sternes.

Alexander indulges his misguided “fantasy” of moving “gaynir to god” by having his smiths create a structure to which he harnesses two griffins, driving them upward by taking advantage of the monstrous desire he knows only too well in himself: he coerces these hybrid creatures to haul his contrivance into the air by dangling meat before them on a pole, always just out of reach, playing on their gluttony even as they serve his own. As the creatures fly into the air with their kingly burden, Alexander exceeds the earthly limits of his body through a technical device that functions as a sort of eye, an aid augmenting the scope of his vision, allowing him to see far beyond the limits of mortal men.

This adventure comes to naught when his device is cast to the ground by divine force, reproving Alexander with another fall and yet another missed opportunity to understand the limits God and nature have put on his now literally fallen mortal body. But the Alexander of Gower’s source traditions persists in his gluttony and curiosity, feeding his ungoverned ocular desires.

In the second episode from this tradition, Alexander, having been cast down in the flying eye-contrivance, turns his ocular desires upon what lies beneath the sea. He has his glaziers construct yet another simulacrum of an eye, this time a prosthetic orb of glittering green glass that allows him to travel beneath the water, seeing all the wonders his desiring gaze craves (*Wars* 5531–4):

Anothire wondirfull witt ȝit worthid in his hert,
 How he miȝt seke doun sounde in to þe see bothom,
 To see quat selcuthe is seet in þe salt watir,
 How many kind of creatours þat in þe cole duellis.

In this English paraphrase of the *Historia de preliis* the author specifically emphasizes Alexander’s use of his eyes while under the water, noting fantastic hybrid monsters and fish with four feet, and in the end he witnesses marvels beyond his understanding (*Wars* 5551–2):

And opir selis he saȝe at sai wald he neur,
 Ðat ware vnlikely to leue to any man wittis.⁴³

Having employed these contrivances to experience this ultimate locus of the marvelous and monstrous, where the boundaries of monstrous form exceed even Alexander's desire for forbidden knowledge, he emerges from the deep to retire his eyes in death. His prostheses have failed him, and once the limits of Alexander's desiring vision are reached, there is no more for him. The narrative closes shortly thereafter with the demise foretold by the half-dead prodigy of Babylon.

The emphasis and reliance in these episodes on devices of human artifice, prosthetic aids to the human body used only in service of desire, resonates with Gower's moral interests in the *Confessio Amantis*. In his own work Gower approves of the tools mankind uses to overcome weakness, following Augustinian doctrine concerning the postlapsarian recovery in mankind's senescent world. He then associates Alexander with the perverse employment of such artifice by directing the reader's attention to Alexander in passages rife with scientific lore, implicating Alexander's monstrous selfhood in his embedded critique of kingship.

Alexander and Society in the *Confessio Amantis*

Gower was writing within the social continuum that produced this critique of the young king, and his practice of referencing Alexander throughout the *Confessio*—in the episodes of Diogenes, the Pirate Dimonides, and elsewhere from the Pseudo-Callisthenes Alexander tradition—confirms the expectation that readers understand the negative Alexander tradition he represented through his textual references and narrative concentration on the king. After introducing Alexander through repeated negative references, Gower establishes the birth of Alexander in Book 6 amid a discourse on natural magic and gluttony, and uses Book 7 to enumerate the education of this misguided king. In doing so he draws upon cultural associations with the Alexander of fantastic travel narratives of the east, misuse of technological marvels such as the prosthetic eyes with which he sees the limits of ocean and sky, epistolary conversations about *mirabilia* with Aristotle, and perhaps even typological associations with Cain.

Through all these associations Gower builds on the notion that this morally monstrous Alexander represents the worldly state of humankind. For Gower's culture, Alexander was a hero, but a hero despite his moral failings. By employing the figure of such a king in the context of a moral message implicating human sin, social division, and the misuse of technology, Gower suggests that this monstrous Alexander is the symbolic representative of all mankind. But this is not the only work in which the author uses to confirm the idea of humanity as monstrous. Gower elsewhere

engages in monstrous representations of the body politic in the *Vox Clamantis*, where Gower first establishes the connections between man and monstrosity early in his career.⁴⁴ In the *Vox Clamantis*, Gower describes his terrifying idea of mankind ungoverned by will or reason figured as monstrous hybrids. His description of the events of 1381 depicts the craftsmen's transformation into monsters after having turned into beasts (*Vox Clamantis* 1.3.252–8; 1.10.758–9):

Sic transformatas formas natura reliquit,
 Et monstros similes fecerat esse boues;
 Vrsinosque pedes caudas sililesque draconum
 Gestant, quo pauidus omnis abhorret eos:
 Sulphureas flammās emittunt oris an antro,
 Quas, vbi disperse sunt, aqua nulla fugat.

Nature forsook their transformed shapes and had caused the oxen to be like monsters. They wore bears' feet and tails like those of dragons, so that every trembling person shunned them. From their cavernous mouths they emitted sulphurous flames which no water could put out, when they had spread.

Septem progenies, quas ipse Chaym generauit,
 Cum furiis socii connumerantur ibi.

The seven races which Cain himself fostered were reckoned comrades there among the madmen.⁴⁵

Gower's descriptive power details the extent to which ungoverned will leads to the overlapping moral horrors that obliterate common profit: division of the self and division in society. Thus Gower's placement of the ungoverned masses of monstrous craftsmen among Cain's kin.

We should not be surprised to find that Gower's *Confessio Amantis* incorporates the bodies of fallen monsters. The author's oblique references to such monstrous marvels serve as vital thematic elements throughout the structure of the poem. In this work, Gower first represents man in this manner through the effigy of Nebuchadnezzar's dream, as a monster whose fallen body signifies mankind's sociopolitical decline through time. The hybrid Alexander he later employs, symbolizing both the greatest and most dire of human achievements, symbolizes the fundamental division in humankind just as the dream image of Nebuchadnezzar does in the *Prologue*. By establishing the major thematic concerns of the *Confessio* through the image of a waning world represented as a marvelous body, Gower verifies the centrality of the monstrous for both his *Prologue* and the thematics of the *Confessio* as a whole.⁴⁶

Gower's emphasis on the monstrousness of humankind begins with this *Prologue* image from Nebuchadnezzar's dream. His first monstrous body

appears as a “wonder strange ymage” of a man with golden head, silver chest, brass belly, and legs of steel and clay (Prol.604–17). Russell Peck terms this “the monster of time,” suggesting that the hybrid human shape denotes Gower’s connection between the bodily condition of man and his temporal trajectory after the Fall.⁴⁷ Gower in the *Confessio* uses this monstrous body to demonstrate how passing time signals man’s increasing distance from God.

Daniel interprets the marvelous image of Nebuchadnezzar’s dream as an allegory of the passing empires of the world, inaugurating an exegetical resonance between the historical and the political (CA.Prol.625–30):

This was the swevene which he hadde,
 That Daniel anon aradde,
 And seide him that figure strange
 Betokneth how the world schal change
 And waxe lasse worth and lasse,
 Til it to noght al overpasse.

This “monster of time” in the shape of a man represents the postlapsarian trajectory of humankind for Gower: since first succumbing to the chain of gluttony, avarice, and pride in the garden, man has been plagued with sins and division. Cain, the first man after the fall, was conceived as a hybrid of mind and sense, and went on to fratricide, monstrosity, and technology.⁴⁸ These symbolic links between man and the monstrous are strong in the image of Nebuchadnezzar’s dream, but during the course of the *Confessio* the monstrous body of King Alexander comes to outweigh them, becoming central to Gower’s emphasis on the sciences in Books 6 and 7. This monstrous body represents the sin of man’s governance in the world, exemplifying Gower’s underlying mistrust of the prosthetic among notions of a technological recovery from the degenerated state of humankind.

Gower expands, using Alexander the Great as a symbolic nexus for mankind’s sins and the misuse of science and technology expressed in terms of *mirabilia*, highlighted by the break in form between Books 6 and 7. There his lengthy discussion of Alexander draws on description as well as common medieval associations with Alexander to deform the structure of his thesis on the monstrosity of man. Gower employs this imagery to communicate his disapproval of the technological effect of the sciences on man as a moral creature, simultaneously decrying the manmade *mirabilia* produced by technology to serve political ends. Through these monstrous

images and symbols in the *Confessio*, *mirabilia* become a vocabulary for conveying the negative effects of redemptive prosthetics upon man's earthly estate.

The symbolic cultural associations of Alexander—monstrous, hybrid, and technological—may help to explain the ostensibly awkward rupture as Gower leaves the seven deadly sins for the matter of Alexander in the transition between Books 6 and 7 of *Confessio Amantis*. This break revolves around the scientific discourses in these books, which appear to alter the trajectory of the sin-structure initiated in the Prologue. In the Alexander traditions assembled in Gower's work, the king functions as a symbol for the effects on mankind of gluttony, the first sin in the Garden, which led to pride and the expulsion.

In the seventh book of the *Confessio*, Gower offers an encyclopedic catalogue of Alexander's education in rhetoric, statecraft, and most notably the sciences.⁴⁹ The poet's redemptive moral program plays on the resonances between Alexander, with all his thematic and symbolic associations, and Richard's dubious governance expressed here through misuse of the sciences and technology, emphasizing the point that through them, man—"his ogne cause of wel and wo" (Prol.547)—has made a monster of himself.

At the critical juncture of the apparent structural break between Books 6 and 7, Amans asks to hear more about Alexander's education in terms of "strange things," his curiosity compounding Gower's intended effect by performing a perfect misreading of the *Confessio*'s moral thrust. This subtle yet powerful ploy forces the reader's self-conscious assessment of Gower the author, Amans the narratorial construct, and the cultural meaning of Alexander in the text all at once, emphasizing the essential moral problem of *curiositas* in a Christian but fallen world. In the textual gap created by the break in the *Confessio*'s structure in the transition from Book 6 to Book 7, Alexander's monstrousness fills the void, explaining the diversion to the scientific material from the matter of Alexander. This nexus of the symbolic, political, and practical levels suggests that Gower constructed this narrative "break" with some care, using divided, hybrid Alexander as a political symbol for humankind in his moral lesson on division and decline, which he so carefully outlined in his *Prologue*. Alexander is significant because structurally in the *Confessio* and symbolically in the culture, he represents kingship, the pinnacle and thus the exemplar of earthly political and moral life: through Gower's carefully chosen examples, Alexander functions in the text as an exemplar of poor governance, the negative model for all men who would be kings or who would follow them.

From Prologue to Conclusion

Late in the *Prologue*, Gower establishes internal division as the cause of mankind's worldly suffering, a cause only hinted at through the man-like marvel of Nebuchadnezzar's dream (CA.Prol. 991–1001):

Bot in a man yit over this
 Full gret divisioun ther is,
 Thurgh which that he is evere in strif,
 Whil that him lasteth eny lif:
 The bodi and the Soule also
 Among hem ben divided so,
 That what thing that the body hateth
 The soule loveth and debateth;
 Bot natheles fulofte is sene
 Of werre which is hem betwene
 The fieble hath wonne the victoire.

This passage locates the origin of the body's degeneration in the Fall, when Adam and Eve first succumbed to Gluttony and subsequent sins. Thus begins man's own hybrid nature, exemplified in this quotation through the victory of the feeble body over the soul (l.1001) and confirmed historically in the birth of Cain. Gower sets these matters within the trajectory of an Augustinian redemption history inaugurated by gluttony, the very sin at the heart of the narrative of Alexander's birth in Book 6. The fundamental division in man established in the *Prologue* is the basis of all the problems Gower addresses in his work.

Alexander, then, is an important symbol for Gower, and the references to him throughout the *Confessio* not only attest to Gower's fascination with this king, but also provide an avenue of entry for Gower into the arenas of the monstrous, the marvelous, and the prosthetic: the triumvirate of fourteenth-century English *mirabilia*. Gower's symbolic references to *mirabilia* through their relation to prosthesis in the greater Alexander tradition are so frequent and focused that they cannot be overlooked; they are simply too important to the narrative, constituting substantial editorial choices by this poet and compiler.

As Gower selectively explores the Alexander tradition throughout the *Confessio*, the typological significance of the young king begins to grow, eventually appearing to divert the structure of Gower's story. The weight of rhetorical and analogical evidence suggests that Alexander is used by Gower as a negative model, an example of failure even in the best of occidental kings. This is clear in the Diogenes episode, in which the philosopher speaks from his barrel to scold the king for having a will uncontrolled by

reason (CA.III.1200). Similarly, Gower's use of the *Letter of Dindimus to Alexander* in a passage condemning the idolatry of the Greeks suggests a moral failure in Alexander even as it reinforces traditional associations between the king, division, and idolatry (CA.5.1455–9):

In blaminge of the Grekes feith
 And of the misbelieve, he seith
 How thei for every membre hadden
 A sondri god, towhom thei spradden
 Here armes, and of help besoghten.

This passage continues, enumerating the members of the body and the god assigned to each. Significantly in this passage linking Alexander to idolatry, the partition of a human form echoes division in the sins of man outlined in the *Prologue* dream of Nebuchadnezzar. Backed by the cultural weight of monstrous and marvelous associations, the Pirate episode initiates a political assessment of Alexander that resonates through Gower's subsequent references to the character. Alexander's portrait begins with this dressing-down (CA.3.2386–97):

Bot for I lede a povere route
 And am, as who seith, at mischief,
 The name of Pilour and of their
 I bere; and thou, which routes grete
 Miht lede and take thi beyete,
 And dost riht as I wolde do,
 Thi name is nothing cleped so,
 Bot thou art named Emperor.
 Oure dedes ben of o colour
 And in effect of o decerte,
 Bot thi richesse and my poverté
 Tho ben nought taken evene liche.

Even in the kingly role for which he was revered as a worthy, he is schooled by a lowly buccaneer, for Alexander's "dedes ben of o colour" with the pirate's; Gower trades on this negative Augustinian image of Alexander throughout his text, linking Alexander's monstrous body with his political failures. In the *City of God*, kingship develops through theft and conquest—kings are simply petty tyrants writ large. The repeated references to the Alexander legend, combined with Gower's implicit and explicit emphasis on the monstrousness inherent in a polity ungoverned by reason, echo throughout the *Confessio*. This is especially apparent in the crucial break between Books 6 and 7, where the sin and the sciences accreting

around Alexander underscore Diogenes's admonition to the young king: "thi will is cause of Sinne" (III.1290). That this faultline is exploited through the body of Alexander suggests that his approach to secular *mirabilia* is more nuanced than that of Chaucer or other contemporaries. Gower takes this notion beyond the openly ironic references to technology in Chaucer's *Former Age*, addressing it instead as a theological, social, and political factor in producing the "monster" that mankind has become in Gower's time.

Many critics have offered an explanation for Gower's representation of Nectanabus and Alexander in the section on magic, citing astrology as the more acceptable form of magic in late fourteenth-century England, and noting Gower's general emphasis on the sciences related to the education of a king. However, the Alexander texts Gower chose were so popular and so often concentrate on details of monstrosity, odd eye coloration and the like, that in invoking Alexander through the Nectanabus segment and following up with the material on the education of Alexander in Book 7, Gower offers a more broadly associative symbolic framework relevant not only to the sin-structure of the *Confessio*, but also to the structural relationship between the education of a king in Book 7 and the *Prologue* concerns with division and rule. In short, Gower's apparent structural problem is a self-consciously deliberate textual moment intended for the reader, redoubling emphasis on mankind's sins through a critique of the marvelous Alexander.

Gower is too controlled a rhetorician to fall prey to momentary fascination, loss of focus, or mere whimsy, as some have implied. Rather, the "Alexander bridge" in *Confessio* 6–7 serves as a symbolic nexus used by Gower to maintain focus on his greatest concern in the *Confessio*: internal division and man's position in Christian redemption history. Man is composed of soul and body, a hybrid even before committing the first sin that led to the expulsion and production of another hybrid, Cain, whose murderous will, exilic wandering, and propensity for technology show clear affinities with Alexander. Man, unable to spare himself from the Flood save with the help of Noah's Ark, is in Gower's own example (from Prol.1016) represented through an assemblage of symbolic associations with Alexander's monstrous, hybrid body and its hopelessly sinful and misguided technological prostheses.

Gower need not have dwelled upon the physical attributes of Alexander because they were so well known in England during his time. Rather, the aim of his discourse—the characterization of misrule through the effects of misused prosthesis, or empty spectacle—is played out in his book through references to both the sciences and to the marvelous figure of Alexander. If Gower had little or no knowledge of the medieval sciences, he would not have bothered to explain the astrological magic of Nectanabus, or to

concentrate on the fantastic education of Alexander, nor would he have had the knowledge to show a representative bias for more innocuous natural magic in Book 6, nor would he have structured his work around the associative symbolic structures provided by the monstrous hybrid bodies of Nebuchadnezzar's dream-statue and King Alexander. Instead, it is in the Alexander-crux of Books 6 and 7 that Gower offers his most thorough catalogue and assessment of the sciences through the section on the Education of Alexander in Book 7. This encyclopedic segment on the sciences is prefaced in Book 6 with the account of the fantastic events surrounding the birth of Alexander. Gower describes the young king's nativity among "wondres many" (CA.6.2260) and immediately links the marvels of his birth to his future education (CA.6.2271–6):

The tempeste ate laste cesseth,
 The child is kept, his age encreseth,
 And Alisaundre his name is hote,
 To whom Calistre and Aristote
 To techen him Philosophie
 Entenden, and Astronomie

Gower here concentrates on the marvels around Alexander's birth and the education he will receive, but lurking below the surface of this version is the Alexander tradition of Gower's sources, the Nectanabus story and the marvelous monsters it engenders in the text. Amans's reading then serves to point up the sins that are already lurking beneath the surface.

What is of first importance is the position of this narrative in the greater scheme of the *Confessio Amantis*. The *Confessio*'s structure seems in part to organize around the central moral principles present in the Alexander material, as Gower invokes the symbolism of Alexander to make his moral point about the constitution of humankind. The *Confessio*'s break in structure emphasizes Alexander, whose monstrous body becomes a significant part of Gower's moral point about the state of mankind. Alexander is a physical prodigy; he is typologically linked to figures such as Cain and David; he is compelled to use whatever technological means will take him beyond the limits of nature; he is a combination of man, monster, and the mechanical, the ultimate hybrid used by Gower to represent medieval man's fallen state in the *Confessio Amantis*.⁵⁰

From Gower's association between Alexander's monstrous body and the worldly estate of man emerges the theme of prosthetic artifice underlying the anxiety about *mirabilia* in the *Confessio*. Gower is less concerned with the crafts and sciences he uses to discuss man's situation than with their effects on man as a moral creature. Man's misguided attempts at a prosthetic

recovery from the Fall through technology make him a monster; witness Augustine's condemnation of *mirabilia* such as Alexander's in *Confessions*, 10.35, on *concupiscentia oculorum*, or sins of the eyes:

It is to satisfy this unhealthy curiosity that freaks and prodigies are put on show in the theatre, and for the same reason that men are led to investigate the secrets of nature, which are irrelevant to our lives, although such knowledge is of no value to them and they wish to gain it merely for the sake of knowing. It is curiosity, too, which causes men to turn to sorcery in the effort to obtain knowledge for the same perverted purpose. And it even invades our religion, for we put God to the test when we demand signs and wonders from him, not in the hope of salvation, but simply for the love of the experience.⁵¹

In the Ricardian period, the advent of marvelous *techne*, the *curiositas* surrounding *mirabilia* and the wonders of travel, and the ongoing rationalization of natural magic all conspired to figure mankind as the base receptacle of misguided desire, willfully using his increasing technical knowledge of the world to evil ends.

Through the submerged discourse on *mirabilia* underlying his source material on Alexander, Gower employs a symbolic vocabulary for conveying his attitudes about the negative moral effect of prosthesis on man, pitting Alexander's association with artifice against Arion's musical association with universal synchrony. In contrast to the playful ambivalence Chaucer conveys about marvels, technology, and the sciences, Gower's message employs a consistent theme from the "monster of time" in Nebuchadnezzar's dream through the technical education of monstrous Alexander in Book 7. This theme, that mankind's prosthetic recovery since the Fall offers little to man's moral center, presages Richard's fall with the resounding echoes of the fall of Alexander's monstrous body.

CHAPTER 5

CRAFT AND IDOLATRY: “SOTYLLE”

DEVICES IN MANDEVILLE’S *TRAVELS*

*Technology: the knack of so arranging the world that
we don’t have to experience it.*

—Max Frisch

Situating Mandeville

By the late fourteenth century, the complex interrelationships between marvels and technology brought changes to the depiction of *mirabilia* even when situated in the fabulous east, the geography of marvels. King Alexander was driven to plumb ocean depths and scrape the skies at the end of the world in his Dædelian pursuit of marvels, but even works with more earthbound protagonists could cast manmade marvels in complex roles. It might seem too obvious at first to point to the marvels of the *Travels of the Sir John Mandeville*. Mandeville’s work has had a spotty critical history with regard to his reputation for truth-telling, but in the fourteenth century, his reputation for cataloguing the marvels and wonders of the east was unparalleled, and in both England and France his *Travels* was considered a worthy book of natural science and an unparalleled register of *mirabilia*. Jean d’Outremeuse bound it with other works of science, solidifying Mandeville’s reputation as a knowledgeable observer of preternatural phenomena, and in England the reputation of the *Travels* as a popular book of marvels exceeded its reception as a pilgrimage guide.¹ The very ubiquity of the rapidly proliferating text among Europe’s later medieval courts, and the fascinating shades of wonder Mandeville brought to certain of his representations, suggests that we should conclude in the wide world of marvels he portrays.

The author, whom convention leads us to call John Mandeville despite the lack of critical success in identifying a real-world analogue to the book’s

narrator, claims in his book to have traveled to the ends of the earth, almost to the terrestrial paradise, seeing many marvels and wonders along the way. His book is framed as an itinerary and travel narrative, but was composed, in all probability, in a French library in the sixth decade of the fourteenth century. Despite Mandeville's dubious reputation among modern scholars, who find in his judicious compilation of source material a confabulated east never visited by the narrator, the popularity of his story was such that it proliferated in less than two decades into most major European languages, eclipsing the tales of Marco Polo and eventually finding its way, by the end of the Middle Ages, into the hands of Christopher Columbus. The text's marvels are so choice, its descriptions so rich, that its pastiche rang more true than Rusticello's story of the Polos' actual voyages.

Certainly the texts of the *Travels* have been mined by critics again and again (and again) for examples of all manner of marvels and wonders, often without much distinction. Oddly, however, *manmade* marvels have never factored in the critical discussion of Mandeville's texts. Somehow they were lost in the mix, receding into invisibility among the myriad marvels of the author's imagining. But having come to the edges of the world with King Alexander, I conclude by returning from the exotic east with Mandeville. His techniques for representing fictional journeys, eyewitness accounts, and descriptions of the marvels of magnificent eastern courts were simply the product of a good imagination set loose in a western library, but reveal much about the reception of manmade marvels in late fourteenth-century Europe, where the book of Sir John Mandeville served as one of the primary secular marvels-texts of the later Middle Ages.

The implications of Mandeville's manmade *mirabilia* emerge from the author's contrasting representation of two identical sets of mechanical courtly marvels. Both images, featuring automated birds that performed during courtly entertainments, find their analogues among the very real *automata* of the classical tradition, in the works of Hero of Alexandria and Philo of Byzantium, whose hypothetical engines animated birds, inspiring an ongoing Islamic tradition from which Europe received its own tradition of avian *automata*. We will see in the court of the Great Chan of Cathay a positive reception, as Mandeville represents himself eagerly investigating marvelous golden birds by interrogating the very craftsmen who built them. Conversely, in his retelling of the story of the horrific Old Man of the Mountain, the author practices a distinct rhetorical detachment, distancing himself from the idolatrous manmade *mirabilia* the Old Man employs in his murderous perversion of the garden of Eden. Both sets of golden mechanical birds, richly enameled *automata* capable of beating their wings, singing, dancing, and otherwise commanding interest at the heart of these contrasting aristocratic experiences are the same, exposing, through

the perspectival evaluation of manmade *mirabilia*, just how vastly different the instrumentality of the marvel governs its reception. Too often, Mandeville's marvels have been read in sheer bulk, rather than for what they reveal as individual examples. Reading these marvels against the larger framework of Mandeville's Christian geography will suggest some of the depth that Mandeville brings to the marvelous profusion of his text, and to the nature of manmade marvels "back home" in western Europe.



The Travels of Sir John Mandeville is an artful conflation of pilgrimage lore and travel narrative, expressed as the selective memoir of Sir John Mandeville, Knight, ostensibly from St. Albans and recently returned from the eastern end of the world.² The variety of material synthesized into his narrative is organized into a roughly bipartite structure, detailing an initial pilgrimage to Jerusalem, and concluding with a series of episodic travel narratives located in the wider world of the exotic east, before a brief coda on Papal sanction during his return home.

Wandering the world in search of wonders, the narrator, Sir John, takes the long path east, toward the terrestrial paradise. He turns back from eastern marvels only reluctantly, like Alexander a victim of frail flesh, complaining of his body "that [it] me distreynen, that diffynen the end of my labour ayezt my wille."³ In this he shares a limit with Alexander, connecting *mirabilia* and the fallen body, but whereas Alexander's final fantastic experiences were always narrated as the exploits of a distant prodigy, the *Travels'* narrator constructs the reader as a fellow sojourner on the road east, developing and playing upon reader identification with the experience of the earthly wonders encountered along the way.

European interest in Mandeville's *Travels* has been attributed variously to a simplistic taste for marvels, a misplaced desire for guidance during exploratory journeys, and an expansion of interest in or curiosity about pilgrimage and travel.⁴ But although the popular identity of the narrative is founded upon its myriad marvels, and the texts have had many afterlives as a mine for examples of *mirabilia*, the work has never been examined specifically for what it says qualitatively *about* its marvels. These marvels are far more than static objects or window-dressing for the narrator's fantastic journey; they are thematically integral to the structure and moral concerns underlying Mandeville's work, and in key cases, intimately bound up with our matter, the manmade marvels of western court life at the end of the Middle Ages.

As its title indicates, *The Travels of Sir John Mandeville* is a work about movement, and the narrative details a journey from the familiar cities of

occidental Europe toward the terrestrial paradise lying in the farthest east. Such a trajectory implies linear movement through space, but to the fourteenth-century Christian it also suggests a movement backward through time. Sir John's *Travels* eastward take him back through Christian redemption history from the aging and fallen world of the west to fantastic locales where unorthodox primitives maintain a spiritual grace in "the est at the begynnyng of the erthe," closer to where the terrestrial garden lies.⁵ Along the way east, Mandeville recollects for readers a various itinerary of marvels, monsters, and other wonders, narrating a singular journey that partakes of pilgrimage manual and wonder-book, encyclopedia and romance.⁶

The author employs a first-person narrator to describe the wonders of his eastward journey, synthesizing varied source material into a seamless narrative apparently depicting personal experience. This style is calculated to invite reader participation in Mandeville's journey of discovery, in which the ultimate destination is the beginning of the story—not of his *Travels*, although he has returned to Europe to tell of them, but of Christian salvation history itself. The author seems to have learned the lessons in texts such as *Alexander and Dindimus*, wherein the western ideals exemplified through Alexander are examined in dialogue with eastern primitives and are found wanting. What Mandeville's journey offers, through his reports and observations of *mirabilia*, is a comparative look at the state of the author's world, contrasting the simple but exotic life of the east with fourteenth-century Europe in a state of economic and sociocultural flux. *Mirabilia*—especially manmade marvels, are the token, the symbol, or term of exchange figuring prominently in this comparison between east and west.⁷

Marvels rehearsed in travel narratives and wonder-books were the intellectual currency of medieval European interest in the east. These stories proliferated in the wake of the crusades, as the new cultural proximity to the riches of the far east contributed to the European taste for the exotic, and the fine mechanical knowledge of the Arabic world began to spread through European courts from its initial conduit in Frederick II's Sicily. Texts such as Mandeville's *Travels* allowed curious Europeans to savor these wonders, and generations of critics have incorporated the book into discussions of travel, exoticism, and encounters with otherness. Mandeville's marvels are the landmarks of his eastward itinerary, and also the subject of the imaginary landscape he synthesizes. The exotic characters and geographies that so often draw critical attention to the *Travels* reflect the ways western audiences perceived the notion of travel or encounters with the unknown; in fact, it is through his *mirabilia* that one may find interesting avenues of access to medieval ways of thinking.

Most would agree that Mandeville's inquiring narrative contributes to the rich character of the medieval European literary marvel. However,

despite the overwhelming centrality of *mirabilia* in this fantastic narrative, few scholars have reflected upon what the nature of these marvels as represented by the author may disclose about his text and the culture from which it emerged. The Mandeville narrator's amply documented curiosity about *mirabilia* is a crucial vehicle for the underlying theme of worldly dissolution that emerges in the comparison between west and east. Two contrasting episodes with radically different approaches to similar marvels form the basis of my reading. First, I examine the description of the fabulous mechanical peacocks in the palace of the Chan of Cathay, a description of demystified *mirabilia*. In this almost literal short-circuiting of wonder, the author represents Mandeville's curiosity in a manner that transposes traditional forms of wonder into mercantile contexts more familiar to the guildhall than to romance. Mandeville confirms the mechanized nature of the birds, diverting his sense of wonder to examine mechanical craft. Later, in his final drive eastward toward the terrestrial paradise, Mandeville relates another encounter with marvelous mechanized birds, this time in the false paradise in the sinister fortress of the Old Man of the Mountain. The marvels in this garden form a grotesque simulacrum of the terrestrial paradise. Mandeville's stake in *mirabilia* emerges in the difference between his enthusiasm for the Chan's delightfully entertaining marvels and his apparent abhorrence of the transgressive marvels of the Old Man's garden. His representations reveal an ideology that embraces curiosity while carefully observing the line between mankind's imitative art and representational transgressions against the divine.

Examined as points in a journey from the fallen west toward the terrestrial garden, Mandeville's mechanical marvels participate in a narrative comparison between the terrestrial paradise and man's imitations of nature. These objects, made subject to Mandeville's curiosity, reveal a complexity that exceeds philosophical classifications of marvels, while simultaneously reducing them to crafted commodities at play in mercantile circumstances reminiscent of the courtly affinity informing the arts, as described in previous chapters. The social space of these romance marvels is altered to accommodate themes relating Mandeville's chronological moment to mankind's purer state in the Garden, in a comparison of marvels rendered as mundane objects through authorial manipulation of curiosity and wonder.

Orienting Marvels

Mirabilia in the *Travels* break the boundaries between witness and marvel established in earlier marvel-laden travel books, such as Odoric of Pordenone's *Itinerarium de mirabilibus orientalium Tartarorum*. The narrator deliberately represents his experience of marvels in alignment with the text's

notions of space and time, the trajectory of travel. Unlike the dry and conventional marvel-catalogues Oderic of Pordenone or Friar Jordanus formulated only decades earlier, the *Travels* colorfully describes the psychological function of *mirabilia* during this moment in the rapidly decentering western universe of the fourteenth century, when the contacts and cultural exchanges authorized by the *Travels*' depictions of *mirabilia* were affecting contemporary practices of cartography, curiosity, and intercultural relations.

Mandeville's narrative functions as a meta-reading of contemporary marvel-books, the narrator's rhetoric indicating cultural approaches to the sources of his text. Thus the Cotton Version of the manuscript employed in this chapter reflects not only the author's commitment to representing the story of Sir John, but also offers a late medieval European view of English epistemological makeup: the ways medieval Englishmen understood the world, its contents and expanses. The *Travels* is more than another travel book; it is a social geography of Middle English *mirabilia*.

As such, the author's interest in marvels is enmeshed with the Christian scheme of space-time defining the overall shape of the work. His inconsistent manner of recording geographic detail at first suggests that the narrative is unconcerned with such matters, leading some to discount the idea of space.⁸ However, the work's movement suggests a supreme interest in the medieval Christian idea of space, encompassing both geographical and temporal aspects by representing the Creation through the terrestrial garden at the easternmost end of the world, and the fallen state of the contemporary world implied through the origin of the journey in medieval Europe.

Space, for medieval cartographers and others who would project their thinking in graphic terms, was not the isolated dimension that it has become for moderns. Medieval concepts of geographic space intersected with notions of time to produce visual maps encompassing the historical narrative of Christian time. This narrative traced man's tenure in the fallen world as he was carried along in time's tide, which "flowed down the map, from the expulsion from Paradise in the east, through the parade of empires, to the newest cities in the west."⁹ The terrestrial paradise located at the end of the world was in many respects the organizing principle of medieval spatial practice, whether in geography, cartography, or history. The place of the expulsion from the garden indicated the beginning of man's time in the fallen world, the garden also serving as the source of the four rivers that would spatially partition the earth.¹⁰ Mandeville's *Travels* organizes itself roughly according to this arrangement of space and time, his multilayered textual "map" organized geographically as one man's eastward itinerary, and temporally as a Christian journey into the cultural past, to view spaces in which faith reflected in earthly perfection is still seen to exist in the senescent world.¹¹

The paradigm established by this schema is one in which Mandeville's wonder-filled journey eastward becomes a figural return to an earlier place

and time, where European Christian values could be imagined preserved among the *mirabilia* of far lands. The terrestrial garden lying at the end of the journey signals hope for reform at home, and his portrayal of the false garden highlights the contrast between western life and eastern spirituality.

Mandeville's *Travels* seems to bear a closer relation than previously thought to the idea of the *mappa mundi*, with its Christian schema and enthusiastic representations of the marvels and monsters populating the margins of the world. Mandeville confirms the work's spatio-temporal superstructure at the end of his tale, as he relates the Roman interrogation of his book during his return to orthodox Christendom. In the English manuscripts, he validates his own book by establishing a comparative relationship with another book, confirming through this affinity not only the value but the shape of his own work:

And oure holy fader of his special grace remytted my boke to been examyned and preued by the avys of his seyd conseil, be the whiche my boke was preued for trewe; in so moche that thei schewed me a boke that my booke was examyned by that comprehended fulle moche more be an hundred part, be the whiche the Mappa Mundi was made after. (229)

The book Mandeville represents as interrogating his own text (and finding it acceptable) was likely Ranulph Higden's esteemed *Polychronicon*, the source of some of the most important medieval visual *mappae* and a favorite among contemporary marvel enthusiasts. The map is cited by Mandeville along with the *Polychronicon* as an authoritative text against which his own work was compared favorably in the fictionalized account of Roman interrogation.¹² The author does not refer to his true sources, preferring to rework them where necessary to fit his own ideas. The narratorial comparison to Higden's encyclopedia and the *mappa mundi* suggests that, irrespective of subsequent critical opinion, the author was deeply invested in likening his own work to two types of medieval text: a verbal encyclopedia structured according to Christian redemption history, and a visual diagram detailing the scope of the world from east to west. Within these overlapping concerns, he locates an evaluative comparison of similar manmade marvels, whose implications are on the one hand analogous to the production of courtly *mirabilia*, and on the other, an idolatrous usurpation of divine prerogative.

"Sotylle" Courtly Commodities

Read against the source texts from which he took them, certain of Mandeville's marvels must be reevaluated according to their radical departures and cultural reorientations. The manner in which Mandeville relates a particular marvel within the overall structure of the *Travels* occasionally

reveals a deep sensitivity to social and moral aspects of manmade *mirabilia*. Interestingly, marvelous mechanical birds figure in two vitally significant episodes which, when compared, offer insights into the relationship between the terrestrial paradise and the declining west in Mandeville's work.

The primary source for many of Mandeville's marvels is Odoric of Pordenone's *Itinerarium de mirabilibus orientalium Tartarorum* (1330). In this arid and formulaic itinerary of the east, Odoric relates an apparently typical marvel, describing the appearance and operation of a group of mechanical birds installed in the Chan's palace.¹³ The motive force behind this wonder is ambiguous, for the author states that it is either one of man's ingenuity or one of diabolic origin:

In the hall of the palace also are many peacocks of gold. And when any of the Tartars wish to amuse their lord then they go to one after the other and clap their hands; upon which the peacocks flap their wings, and make as if they would dance. Now this must be done either by diabolic art, or by some engine underground.¹⁴

Here Odoric reports the existence of this marvel-among-marvels, listed between an account of a lavishly decorated conveyance for drink and a discussion of the organization of seating in the court, listed without distinction. Odoric manifests no wonder or curiosity as to how the peacocks move; he is interested in them as objects of entertainment and relegates the matter of cause to a vague statement about demonic or human art aligned with common western equations between *automata* and magic. His hypothesis reflects the later medieval tendency to avoid attributing marvels to the divine, aligning his judgment with the bulk of contemporary philosophy; his perfunctory analysis of the range of motive possibilities begins and ends in the fallen world.

Mandeville approaches this source material in his typical fashion, by artfully augmenting and enlivening the descriptions borrowed from Odoric, but here he engages in a vastly different enterprise. He represents himself as actually investigating one of the marvels he has taken from sources. Rather than offering a heavily ornamented version of Odoric's original narrative, in which the matter of the marvel has been expanded but the sense of the passage has been left largely unaltered, he betrays his own interest in a manner consonant with the kids of investigations of court marvels we have seen elsewhere. As part of Mandeville's imagined investigation, the reader is invited into a constructed narrator's self-conscious examination of his psychological reactions to manmade *mirabilia* in a court setting, reminding us of western courts' magnificent self-imagining through *mirabilia*.

Much of Mandeville's work is expanded from source material but largely follows the tone and scope of the earlier texts from which he borrowed. This practice is, for the most part, one of transmitting marvels in a manner that gives focus to *mirabilia* only as the constituents of a vast linear compilation, one that for now unknown reasons of transmission, authorial intent or ability remains for the most part indicative of less analytical attitudes toward *mirabilia* found in earlier marvel-books. Issues of genre and composition have revealed the greater patterns that offer insight on *mirabilia*, such as the *curiositas* discussed in Zacher's seminal work. Zacher addresses the *Travels* in terms of the idea of curiosity as a sin, delving into the sociocultural meaning of marvels in the broad context of fourteenth-century attitudes toward this transgression.

Studies of this sort open the way for observations of the marvel-in-itself, the wonder stripped bare of critical baggage and observed in the context of medieval rhetoric revealing the marvel as the expression of authorial, and therefore cultural, interest in *mirabilia*. In the case of Mandeville's *Travels*, this method has the added advantage of shedding further light on the narratorial persona and constructed reader built up in the *Prologue* but largely absent throughout the text; here in these pockets of rhetorical emphasis, something is given up, the mask slips, and the psychology and prerogatives of the transmitter are revealed in the representation of manmade *mirabilia*.

The suggestion of special emphasis is subsequently borne out by the additional material Mandeville integrates into Odoric's otherwise dry narrative, changing the focus of the passage to reflect his interest in how the marvels operate:

And [at] grete soempne festes before the emperoures table men bryngen grete tables of gold. Andd theron ben pecokes of gold and many other maner of diverse foules alle of gold and richely wrought and enameled. And men maken hem dauncen and syngen clappyng here wenges togydere and maken gret noyse. And whether it bee by caft or by nygromancye I wot nere, but it is a gode sight to beholde and a fair, and it is gret meruayle how it may be.¹⁵

In Odoric's text, the members of the court had to clap their hands to entice the birds to operate, but in Mandeville's text men simply "maken hem" move, and Odoric's emphasis has shifted away from the business of clapping undertaken by courtiers, and onto the mechanized motion of the birds themselves, which "dauncen and singen clappyng here wenges togydere and maken gret noyse" (157). In the context of Mandeville's emphasizing rhetoric this change in focus demonstrates a difference in approach to a particular marvel, singling out this episode from among the hundreds of marvelous images presented in a more or less uniform manner throughout

the text. If Mandeville's book is a compilation of wonders, and in many respects the latter half of the work is just that, then we must accept that either author or redactor meant to draw attention to this mechanically marvelous sequence within the greater body of the text.

Having described the peacocks, Mandeville immediately offers a self-conscious analysis of his own wonder, in which the narrator is enlarged through the author's portrayal of the narrator's psychology—an inner life offered for the reader's understanding and identification through a representation of the psychology of wonder reoriented by the manmade marvel.

As Mandeville accounts for how the Chan's birds move, the interpolation of authorial psychology into the *Travels* is highlighted by the addition of evaluative language. Rather than passively following Odoric in suggesting diabolic art or an underground engine before dismissing the issue, Mandeville opens up an authorizing first-person evaluation. At first he appears to follow Odoric, for the marvelous birds moved "whether be by craft or nygromancye I wot nere." But whereas Odoric at this point in the narrative turns his eye to other aspects of courtly decor, Mandeville continues to focus upon the mechanical birds. Drawing the reader's perception of *mirabilia* away from negative conclusions, he notes that "it is a gode sight to beholde and a fair," inviting continued response through the suggestion that "it is gret maruayle how it may be" before making the transition into the uncharted territory that is our true concern in this segment of Mandeville's *Travels*.

In altering Odoric's text for the *Travels*, Mandeville shifts the emphasis onto the special nature of the mechanical birds. They do not sit in a hall but are brought before the Chan on tables of gold. They are not simply a group of undifferentiated golden peacocks but include a variety of "dyuerse foules" in gold filigree and enamel, reflecting the diversity of taste in the court. No longer a sidelight for entertaining the Chan, they are employed at "grete and solempne feasts." Clearly these fowl are intended to inspire wonder not only in the court but in Mandeville's readers.

The movements of and motivations behind the mechanism having been related and the reader's curiosity primed by the tale-teller's rhetoric, the narrator's elaboration on the matter of the mechanical birds continues with a complete break from the source-text. Here Mandeville's authorizing voice offers key insight into fourteenth-century approaches to *mirabilia*, as "he turns his eyes within" examining his own reactions for the reader, thereby validating his narratorial construct in a tone complementary of the voice in the *Prologue*.¹⁶

But I haue the lasse meruaylle because that thei ben the moste sotyle men in all sciences and in alle craftes that ben in the world, for of sotyltee and of malice and of fercastyng thei passen alle men under Heuen.¹⁷

Here Mandeville breaks with the source traditions by reverting from the catalogue of marvels to a demonstration of his self-consciousness, by discussing the quality of his own response to this mechanical wonder. The experience of manmade *mirabilia* had prepared fourteenth-century readers sharing cultural affinities with Mandeville's narrator to self-consciously analyze their responses to wonder. The reader constructed by Mandeville's text is meant to experience and identify with this short-circuited sense of wonder at a semi-demystified marvel. The narrator's contention that he felt "the lasse mervuaylle" indicates that he self-consciously had analyzed his feelings and found the object of inquiry less of an inducement to the sense of wonder once he understood its provenance. This interpolation reveals the extent to which the writer was familiar with this aspect of the psychology of wonder and the means by which it could be accessed and manipulated in his culture.

This passage makes clear that Mandeville's stake in the marvel revolves around the inability of the marvel to inspire a form of wonder not predicated on its nature as a manufactured object. The reasoning behind this problematized marvel is that the "lasse meruayle" the witness experiences is facilitated by the knowledge he possesses of the wonder's producers, for "thei ben the moste sotyle men in all sciences and in alle craftes that ben in the worlde." This knowledge of their production, in effect the backstory of the Chan's mechanical marvels, indicates several things about Mandeville's earlier rhetoric of knowing, and about the nature of the writer's approach to *mirabilia*. With the narrator's disclosure of his knowledge of Chinese ingenuity, the statement "whether by crafte or nygromancye I wot nere" is brought back into play as a rhetorical device emptied of the narratorial distancing tactic. Used only in obeisance to the dominant forms of reportage practiced with regard to *mirabilia* in the author's culture, the professed lack of knowing implies a wink of complicity, for it is now clear that Mandeville knows it was made "by crafte." To subsequently admit to having "lasse meruayle" suggests that at the very least the writer intended his Mandeville to convey the expected socially generated reaction to his audience while experiencing with that audience a distinct lack of the psychological effects of wonder usually initiated by *mirabilia*. Knowledge of the craft, subtlety, and scientific knowledge of the Chinese cancels the effect of wonder much as looking into the gears and springs of a clock negates curiosity about how it keeps regular time, once again bringing several levels of knowing brought to bear on a single performance of manmade marvels.

The presence of this social mechanism of demystification once again suggests that later medieval authors were beginning to examine and reevaluate the social and literary boundaries of wonder. Here as in Chaucer's *Franklin's Tale*, marvels are represented as commodified objects, subject to the forms of inquiry born of romance, as in the *Squire's Tale*. Mandeville's

special interest in the mechanical marvel moves beyond curiosity to establish the origin of cause behind the objects, and the intangible qualities of wonder evaporate in the face of the confirmation of their foundation in mankind's craft.

The narrator, his curiosity piqued by the cloaked mechanism behind these marvelous mechanical birds, describes his efforts to discover it, saying he "did gret besyness for to haue learned that crafte." Zacher refers to this episode as part of his argument on the element of curiosity in the *Travels*, noting that "[t]o be 'busy' is one delight of the *curiosus*, and Mandeville himself is always 'busy.'" ¹⁸ Indeed, Mandeville's effort to wring from the Chinese an explanation for the marvel of the mechanical birds is strident enough to draw from them a rebuke. Instead of explaining the marvel, they offer him a lesson on the nature of understanding:

And therfore thei seyn hemself that thei seen with ii. eyen, and the Christene men see but with on, because that thei ben more sotyle than thei. For alle other nacouns thei seyn ben but blynde in conyng and worching in comparisoun to hem.

This proverb, taken literally, would seem to equate knowledge with perception or wisdom, and there are numerous eye metaphors signifying prudence in late medieval literature, although none limited to two eyes.¹⁹ Zacher and Higgins approach this matter as a symbolic puzzle without accounting for the greater context of the utterance. Zacher alludes to Mandeville's knowledge of the Christian perspective on Augustinian *concupiscentia oculorum* or "lust of the eyes," suggesting that the comment might have been taken as a compliment, although one taken as a hard lesson by Mandeville.²⁰ Higgins attributes the matter to indirect criticism by the Cathayans, a backhanded compliment to Christians taken by Mandeville from a passage embedded in Hayton's 1307 relation of Cathay, the *Flor des estoires de la terre d'Orient*:

Cestes gens, qui tant sont simples en lur creance e 'es choses espiriteus, sont plus sages e plus sotils que totes autres gens 'es euvres corporels. E dient les Catains que il sont ceus qui voient de II oils, e des Latins disent q'il voient d'un oil, m'es les autres nacions dient que sont aveugles. E por ce puet om entendre que il tienent les autres gens de gros entendement.

This people, who are so simple in their belief and in spiritual things, are wiser and subtler than all other peoples in corporeal works. And the Cathayans say that they are those who see with two eyes and the Latins they say see with one eye, but other peoples they say are blind. And by this one can understand that they consider the other peoples of crude understanding.²¹

Higgins's work follows Zacher's in focusing on the eyes as the text's object of analysis, and what they reveal is significant.²² What has been ignored,

however, is Mandeville's frank evaluation of Chinese ingenuity, within which this more cryptic ocular comparison is located.

I find in the long-ignored vocabulary and court context of the exchange confirmation of the mercantile implications for Mandeville's interest in these manmade marvels. His internal explanation of the maxim places the entire matter in the context of skilled labor and commodification. The matter of the eyes is not settled at the end of the sentence noting that the Cathayans are "more sotylle" than westerners; the following sentence is also subordinated to the comparison through an appositive in which the entire matter is predicated upon the comparison of the marvels through "conynge and worching." While these words may be casually construed to connote some kind of nefarious eastern magic, in their contemporary context, the word "conynge" is customarily associated with the term "craft" and is most frequently linked to the notion of skilled labor. As a self-applied descriptor, *conynge* implies that the Chinese are in possession of skill in a profession, art, or craft. Further, "worching" is similarly bound up with ideas of craft production through the embeddedness of the term in the idea of labor; even when not referring to physical labor, the term is largely associated with the work of numerical calculation, but most often denotes the plying of a skilled trade, art, or discipline. Similarly, the fourteenth-century *Promptorium parvulorum*, an early Latin-English dictionary, relates the term specifically to instruments of craft.²³ Therefore, whatever the maxim on the eyes might reveal, it is used as part of a larger discourse comparing relative craft knowledge, embedded in Mandeville's "busy" inquiry into the craft-based production and workings of a manmade marvel.

Mandeville locates his inquiry through the discursive terminology of craft, and the comparison itself is lodged in the Chinese claim to be more technically proficient, or "sotylle" in fourteenth-century Middle English, than their western counterparts.²⁴ And if in Hayton the Chinese claim proficiency in worldly works, in Mandeville's use of the passage the comparison is drawn specifically with regard to technical craft or artifice. Without straying from Mandeville's text, we see that the Chinese explanation for the eyeball-counting analogy is based in skilled craft, in the ingenuity necessary to produce such marvelous avian mechanisms.

The human ingenuity and artifice at the heart of Mandeville's interpolated profession of interest in the marvelous birds is further made apparent in an unremarked analogy to fourteenth-century European labor practices. Mandeville characterizes the respondent to his request as the Chan's *maistre*. This term is widely attested in this period as an analogue to the English word teacher or professor, and has been taken to imply the possession of magical abilities in this passage; however, *maistre* is also a fourteenth-century English technical term for a master trades- or craftsman, one qualified to teach apprentices.²⁵ That this master refuses to convey his secrets except to

his eldest son evidences a firm parallel in western guild labor practices with regard to passing on knowledge in all manner of skilled crafts. This piling up of craft-related terminology suggests that Mandeville has cast his marvel in terms of the performance of skilled crafts in an environment characterized by technical trades and attendant commodification.

Mandeville therefore finds in the east of the world a mirror of the most elite courtly *mirabilia* of the west, performing in the presence of courtiers and makers in a familiar tableau of magnificent court ritual. As if to highlight the manner of production enabling such performances, Mandeville employs familiar forms of guild secrecy that emerged in the thirteenth and fourteenth centuries, when “proprietary attitudes toward craft knowledge developed rapidly in the specific historical context of medieval urbanism.”²⁶

Whether we choose to accept this terminology as a deliberate qualification of the marvelous birds, or if we attribute it to the unconscious commonalities of technology and trade in the author’s time and place, we must acknowledge that in some instances Mandeville’s *Travels* is a text whose marvels are imbued with something new and different, despite their provenance in more conventional works on *mirabilia*. Mandeville has a special affinity for the example of these mechanical birds specifically because of their mechanical nature.

Mandeville’s connection between court marvels and human craft is reified elsewhere in Mandeville’s texts through reference to another sort of court functionary tightly bound to the elite courts of the west: court scientists. The manuscripts of the Defective Version, perhaps the oldest common text for the *Travels* in England, connect the marvels of court life to the sciences, and specifically to the fine mechanical milieu of court science through which *automata* first entered the west. After a list of the lord’s menagerie, Mandeville turns his focus to the more learned members of the court:

And at þe side of þe emperouris table sitteþ many filosofris of many sciencez, somme of astronomye, somme of nygromancye, and some of geometrie, and somme of pyroma[n]cie, and siche oþer many sciencez. And þei haueþ biforn hem astroloberis of gold oþer of precious stones ful of sond oþer of coles brennyng. Somme haueþ orlagis wel ydiȝt and richely and oþer many instrumentis of here sciences.²⁷

Here the connection between philosophers and mechanical marvels is made explicit through the text’s attention to the astrolabes, well-crafted mechanical clocks, and other instruments used in the pursuit of esoteric crafts. The air of magnificence Mandeville gives these court settings, emphasized in the aforementioned case by the diverse beasts paraded through, intensifies around the performances of jugglers and “enchantours þat don meruaylles” to entertain the court, performances reminiscent of

the illusionistic merchandise purveyed in Chaucer's *Franklin's Tale*. These appearances include a variety of courtly *accoutrements* such as dancing ladies, cup-bearers, and jousting, all "semynge to euery mannes sight" as if they were real. Take for example this passage from the Cotton manuscript:

And þan comen jogulours and enchauntoures, þat don many meruaylles, For þei maken to come in the ayr the sonne & the mone be semynge to euery mannes sight. And after þei maken the nyght so derk þat noman may see no thing, And after þei maken the day to come aȝen fair & plesant with bright sonnee to euery mannes sight. And þan þei bryngen in daunces of the faireste damyselles of the world & richest arrayed. And after þei maken to comen in oþer damyselles, bryngynge coupes of gold full of mylk of dyuerse bestes & ȝeuen drynke to lordes & to ladyes. And þan þei maken knyghtes to jousten in armes fulle lustily & þei rennen togidere a gret raundoun & þei frusschen togidere full fiercely & þei breken here speres so rudely þat the tronchouns flen in sprotes & peces all aboute the halle. And þan þei make to come in hunting for the hert & for the boor, with houndes rennyng with open mouth. And many oþer thinges þei don be craft hire enchauntementes, þat it is merueyle for to see.²⁸

Significantly, these marvels are described as "playes of desport" associating them with the both the semiedible *subtleties* of court gustatory performance, and the range of *entremets* such as those at Hesdin and the court performances recorded by Froissart.²⁹

Casting marvels as entertaining objects of inquiry, puzzles protected by the mysteries of craftspeople and scientists, Mandeville's texts confirm the emergent role of *mirabilia* as both elements of deliberate fictionality and tokens of trade. That these "eastern" marvels could circulate as commodities brings them closer to western life, making them a part of the everyday of the occident, and thereby diversifying our sense of the range of wonder their marvelousness could inspire.³⁰ Of course in a work as diverse as Mandeville's, the darker side of manmade marvels is bound to appear.

The Machine(s) in the Garden

The marvels of the Chan's palace conform closely to the illusory enchantments and other courtly marvels of the medieval west, but Mandeville's texts also draw a clear distinction in the quality of manmade marvels by linking them directly with the sin of *idolatria*.

Leaving the Chan's magnificent palace, Mandeville continues east toward the terrestrial paradise, touring the Christian realm of Prester John's lands through which flow the four rivers of paradise. On the way he recounts a false paradise, a dark reflection of the Garden of Eden. This environment

was constructed through the craft and “sotylle disceytes” of Gatholonabes, the Old Man of the Mountain, who terrorized his region by sending willing assassins on suicide missions against his enemies. Unlike the terrestrial garden formed by God to nurture prelapsarian humanity, this garden is an artificial paradise, contrived by the Old Man to pervert the wills of men to his murderous ends. Higgins has detailed the dialogic relationship between the “senseless sensuality” of this false paradise and the foregoing description of asceticism in Prester John’s kingdom.³¹ But this false garden, in addition to serving as the symbolic moral opposite of Prester John’s land, also symbolizes the problematic potentials for idolatry by locating marvels in a false garden, highlighting a deceptive artifice that provides only the semblance of creation. Mandeville’s careful depiction of the Old Man’s use of *mirabilia* heightens the emptiness of the marvels populating this false paradise. The contrast drawn between Mandeville’s hesitant representation of this garden and the enthusiastic inquiry characterizing his earlier interest in the Chan’s marvels indicates a negative valence cast on this false paradise through the use of the mechanical marvels within.

Mandeville’s description of this place is rhetorically dislocated, held apart from the increasingly loose itinerary-structure of the *Travels*.³² Rhetorical transitions indicating connections between lands and people (“And his londe,” “Besyde the isle”) are absent from the lengthy description of this false paradise, which begins not with Odoric’s characteristic accuracy but with the rather oblique opening, “There was dwellynge somtyme a riche man. . . .” This rhetorical effort to isolate the garden complements the descriptive isolation in Mandeville’s depiction of the stronghold, by locating the garden within concentric rings of mountains, walls, and fortress.

By maintaining a narratorial distance, the author uses rhetoric to prepare the reader to accept the false garden’s isolation as part of a thematic dialogue with the true terrestrial paradise, which he later claims he is unable to describe, uncharacteristically revealing that “[o]f Paradys ne can I speken propourly, for I was not there” (220). Claiming his sparse description is based on the words of wise men, Mandeville later in the *Travels* mentions only the altitude of the Eden, the wall encompassing it, and the impossibility of passing the flaming gate; he breaks from this spare account into a very detailed discussion of the very center of the garden, where a well casts forth the four floods of the Ganges, Nile, Tigris, and Euphrates. These rivers, geographically and rhetorically the center of Mandeville’s account of the true terrestrial paradise, connect the garden to the world and thus to history, as they flow back cross the lands to the west, forming a physical and temporal link between mankind and paradise lost. Mandeville’s narrative undercuts this connectedness by stressing the impossibility of a mortal man reaching this paradise, but his rhetorical concentration on the four floods

assures all Christians of a connection to the true garden lying before, and thus outside of, redemption history.

In a juxtaposition with the rather spare description of the true terrestrial paradise, the lush, sensuous false garden of the Old Man is characterized in minute detail:

And withinne tho walles he had the fairest gardyn that ony man myghte beholde, and therein were trees berynge alle maner of frutes that ony man cowde deuyse. And therein were also alle maner vertuous herbes of gode smelle and alle other herbes also that beren faire floures.³³

The explicit description continues in the manner of Mandeville's typical discourse on wonders, listing the varied and beautiful *accoutrements* of the contrived paradise, including the marvelous contents of the halls and chambers:

And there weren in that place many dyuerse thinges and many diuerse storyes and of bestes and of bryddes that songen fulle delectably and meveden be craft, that it semede that thei weren quyke.³⁴

Here as in the court of the Great Chan, we encounter mechanical marvels, these even more elaborate, featuring all manner of animals that move about as if alive, but which are clearly understood as the products of human artifice. Here also are musical marvels, whose sound was "a ioye to here, and no man scholde se the craft thereof" and that were deceptively compared to angels' voices by their creator.

Of particular significance to me is the contrast between Sir John's marked interest in discovering the methods of craft behind the Chan's mechanical marvels, and the verbal distance and lack of inquiry in his report of these machines within the false garden of Gatholonabes. His earlier profession of interest in "thinges strange" is forgotten as he quickly describes all but the marvels as "many diuerse thinges," heightening the sense of narratorial distance from the more typical wonders of the garden.

Also in this sequence, the author once again diverts from his sources. The stylistic isolation is an authorial invention, as are the details of the marvelous mechanical animals and instruments that Mandeville lists but pointedly fails to investigate. This isolation and cessation of interest in the motivating force behind the marvels marks the false garden as a particular threat to the narrator and author of the *Travels*, and the source of this threat is symbolically and rhetorically located in the way the marvels of the Old Man are used within the pseudo-paradise.

The most openly idolatrous of these marvels is situated under the "many faire welles" of the false paradise, feeding fountains that could perform a

manmade marvel common enough in performances such as the coronation of Richard II, but here framed as a deeply transgressive marvel:

And he had made a conduyt vnder erthe so that the iii. welles at his list, on scholde renne mylk, another wyn, and another hony. An that place he cleped "paradys." (201)

This is a dark reflection of the mechanical *mirabilia* of the Chan's palace, where in Mandeville's source the marvels were thought perhaps to have been run by "some engine underground."³⁵ Here the nefarious engine is the hidden conduit, cleverly concealed so that the Old Man could at his command let flow the milk and honey of paradise, intimating that his garden was the very one that "God had behight to His frendes seyenge, *Dabo vobis terram fluentem lacte et melle*" (201) in imitation of Leviticus 20:24:

Vobis autem loquor possidete terram eorum quam dabo vobis in hereditatem terram fluentem lacte et melle ego Dominus Deus vester qui separavi vos a ceteris populis.

But to you I say: possess their land which I will give you for an inheritance, a land flowing with milk and honey. I am the Lord your God, who have separated you from other people.³⁶

In claiming divine origins for his imitative *mirabilia*, Gatholonabes employs a courtly marvel reminiscent of the table-fountains of court life and the wine-spouting conduits of Richard's pageant processions, but here deployed specifically to usurp divine prerogatives.

Mandeville's rhetorical and stylistic distancing tactics in relating this episode appear to be motivated by the qualities and uses of these marvels, in broad contrast to the enthusiasm with which he represented the "bisy-ness" of his investigation into the workings of the Chan's courtly wonders. This disparity in the representation of response to identical manmade marvels helps to characterize the unstable boundary between *mirabilia* and *miracula*. The difference is here produced by the cultural incentive to maintain the divine as a motivational force in the production of wonder while delighting in the new possibilities inherent in cultural reconfigurations offering access to the natural world. We have seen such motivations elsewhere, in theological arguments, proto-scientific discourses, and in treatments of romance wonders and comparisons between the natural and divine in poetry.³⁷

The mechanized marvels of romance, invitingly rendered in Mandeville's relation of the Chan's palace, acquire a negative aspect as presumptive imitations of the terrestrial paradise. Early in this study I outlined the relationship

between the creation of *mirabilia* and the charges of idolatry haunting the craftsmen and artists who reproduced God's creation. Here, in this false paradise, Mandeville comes face-to-face with the more problematic nature of *mirabilia* in the Old Man's imitation of divine spaces and personage, and the curiosity which otherwise drives the entire discourse on *mirabilia* throughout the *Travels* suddenly dies, to be revived again only as the narrator leaves this troubling episode behind. Caught in a moral crux by Gatholnabes's transgressions, their false nature highlighted by their very proximity to the true paradise to the east of Eden, Mandeville's manmade marvels are cast not as delights, but as morally malignant idols deserving of the destruction that awaits them.

Mandeville, Alexander, and Seth at the Gates of Paradise

Mandeville delights textual travelers "from the west syde of the world" with a bewildering variety of marvels. His story, best described as an assembly of reworked source material and literary invention, appears to have little organization beyond the generic frameworks of Christian scheme of space and time, such as itineraries and mappae, outlined earlier. But among the profusion of *mirabilia* strewn along this structuring eastward movement there is an underlying ambivalence about the terrestrial paradise, revealed by the foregoing comparison between manmade mechanical *mirabilia*. Their courtly environments are strikingly similar, and perhaps technically identical in the *mirabilia* they present. But on another level the nearly identical mechanical marvels of the Chan's and Gatholonabes's palaces are rhetorically highlighted specifically for their conflicting motivations to wonderment, through the contrast between the narrator's enthusiasm for the Chan's entertaining mechanical birds on the one hand, and his manifest abhorrence of similar marvels in the other ruler's false paradise on the other. Emerging from these disparate approaches to *mirabilia* is a thematics of loss through which we may read back through the text to find that it characterizes the whole of the *Travels*.

At the heart of Mandeville's disparate approaches are related notions of technology, redemption, and the decline of the world. The insights into these marvels revealed by his rhetorical and thematic manipulations of source material suggest that even artifacts as similar—and, by the mid-fourteenth century, as familiar—as mechanical birds could be inscribed with very different meanings by late medieval authors. If a courtly marvel is met with delight and curiosity, why is a similar marvel, created in deliberate imitation of paradise, met differently?

Mandeville hints at the moral stakes for these mechanical *mirabilia* in his opening chapters, long before the manmade marvels appear in the *Travels*.

His introductory chapters differ stylistically from subsequent chapters in the detailed description of the marvels of Justinian's statue and the True Cross, forming a narrative diptych through which Mandeville establishes an underlying symbolic framework of spiritual loss and worldly dissolution.³⁸

Mandeville's first chapter provides a brief initial sketch of the eastward itinerary, concluding with the marvel of Justinian's statue at St. Sophia. The statue stands with empty palm outstretched, for "he was wont to holden a round appelle of gold in his hond, but it is fallen out thereof." This image is understood as a token of Justinian's, and by extension Christianity's, loss of dominion over the territories of the earth.³⁹ Men have tried to replace the apple, but it marvelously refuses to remain: "And men wolden many tymes put the appulle into the ymages hond ayen, but it wil not holde it" (6). The loss of worldly dominion represented by the falling apple appears to relate Justinian to the *de casibus* traditions emerging in the fourteenth century and explored by Boccaccio and by Chaucer after him, but the apple is also a dual symbol: its shape betokens the "world that is round" about which Mandeville is concerned, and the apple is a symbolic reference to the Fall and the postlapsarian condition of mankind. The statue of Justinian is a sort of medieval Ozymandias, a representational reminder of mankind's better days. This marvelous image of dissolution is neatly paired with the image of the True Cross in the next chapter, where the greater eastward itinerary of Mandeville's Christian pilgrimage is played out in miniature in the story of Adam and Eve's son Seth.

Themes of loss and redemption raised by the popular Seth legend here become entwined with themes of more gratuitous, curious marvel-seeking in the *Travels*, for among the evocations of the Fall raised by Seth's journey toward paradise is the idea that it was his progeny who lay with Cain's daughters to produce the race of monsters.⁴⁰ Of more immediate thematic and structural importance, however, is the idea that Seth, like Mandeville, seeks the terrestrial paradise, and is like him denied.

Mandeville's eastward journey enacts themes found also in the Seth legend and in Alexander's eastward drive. According to the popular legend as recorded in contemporary works such as the *Cursor Mundi*, after being cast from the garden and failing penance in the rivers of paradise, Adam and Eve took up tools to sustain themselves and began to procreate. In late medieval Christian thought, their tools represented the fallen state of mankind the toolmaker, whose body was weaker for having left the garden. Their grandchildren, the monstrous progeny of Seth's and Cain's lines, were the first technologists of the earthly city. Their presence, and the structuring presence of the Seth legend in the opening of the *Travels*, reifies the Christian themes of loss, degeneration, and redemption underlying Mandeville's entire narrative.

After laboring to the end of his mortal life, Adam sends Seth to receive the “oil of life” to comfort him in his last days. Seth travels east to the gates of paradise by following the westward trail of footprints seared into the grass when Adam and Eve left the garden. At the gates of the terrestrial paradise he is confronted by an angel with a flaming sword who “wolde not late him come in,” but who gives him three seeds, which he plants in his now dead father’s mouth upon returning. The traditional story, condensed by Mandeville, relates how the seeds grow into trees, eventually providing the wood for Moses’ wands, which in turn become David’s staff, and ultimately lead to the delivery of the “oil of life” in the form of Christian redemption, through Christ’s passion on a cross made of those very trees and comprising the second chapter of most manuscripts of the *Travels*.⁴¹

The Seth narrative’s redemptive journey to the gates of the terrestrial paradise encapsulates for Mandeville the temporal and geographical scope of his own journey. The triumphant primitive Christianity he encounters in the furthest reaches of the east contrasts with the dissolution of Justinian’s Christendom in the west, substantiating the trajectory of Mandeville’s Christian pilgrimage toward a redemptive conclusion at the garden, which in the *Travels* is ultimately denied by the fall, partly symbolized in Mandeville’s narrative by the failure of the narrator’s body.

The postlapsarian thematics of loss, set up in the initial chapters of the *Travels*, conjoins in the furthest east with themes of redemption and bodily dissolution symbolized in the narrator’s ambivalent approaches to mechanical *mirabilia*. Mankind, deprived after the Fall of his purer state in the garden, employed tools, prosthetics to sustain his weakened mortal body. The generations of man, monstrous offspring in the Seth legend, dwindle in strength, becoming the first technologists to compensate for their failing temporal bodies.

Herein lies the late medieval ambivalence toward technology: the tools that improved man’s earthly estate were looked upon in a positive light, and Mankind the Toolmaker was praised by Augustine and authors as ideologically diverse as Chaucer, Gower, and Mandeville. But technology also represented distance from humankind’s prelapsarian estate in the garden, our condition before the Fall. For some later medieval English writers, unresolved issues relating to man’s body, his technology, and redemption led to anxieties expressed through representations of *mirabilia*. Gower’s *Confessio Amantis* plays on this notion in the image of Alexander the Great, whose very body symbolized the spiritually negative aspects of technologized *mirabilia*, and who also was denied entry into paradise in the famous episode of the *Iter ad Paradisum*.⁴² In *The Former Age*, Chaucer, whose ambivalent and even somewhat ironic approaches to *mirabilia* are discussed in Chapter 3, lists the technical wonders and commonplaces of the modern

world as artificial aides to the fallen body, creating in the fallen world a weak semblance of man's estate before the Fall. And the *Travels*, employing structural affiliations among pilgrimage, sin, and technological marvels, ultimately denies its narrator a lasting proximity to the garden because of the failure built into his mortal coil.

Mandeville's wildly contrasting approaches to mechanical marvels form a concrete example of this ambivalence. In the context of courtly revels, the mechanical *mirabilia* of the Chan become positive symbolic representations of the achievement of human knowledge. In the context of a perverse imitation of Paradise, such technological marvels are grim reminders of the senescence of the world under man's dominion. Thus the cyclical element of the *Travels'* eastward trajectory, in which the Christian pilgrimage brings Mandeville closer to the terrestrial garden, through primitive Christian cultures unspoiled by the ravages of the western decline through the ages since the Fall, only to send him home like his fellow textual travelers toward paradise, the victim of his failing mortal body and all the sins such weakness implies.

In my own return to a beginning, I would like to add a final comment on the first marvel of Mandeville's text. The apple of Justinian signified more than a biblical loss of innocence and the spherical world he failed to grasp; these losses further coalesce around the statue's locus in Constantinople, signifying the textual world lost through Justinian's incontinence in burning the famous library of that city. Thus the world Mandeville circumnavigates in his *Travels*, a marvelous world whose composition began and ended, not in eastern lands, but in a western library, reconfirms the primacy of text in the transmission of lost marvels. But even in the purely textual world of his marvel-book, Mandeville records the dual response he shares with so many other subjects of the marvelous manifestations of medieval technology. He displays a desire for knowing when the marvels are deployed on familiar ground, but their lingering associations with idolatry and evil leads him to isolate them when the context of their performance suggests that their purposes may serve ends other than the craft production behind the maintenance of courtly magnificence. In the end, his geography of marvels reveals a paradoxical desire to retain intimate knowledge only of those marvels whose origins are aligned with the craft production of *mirabilia* at home.

CONCLUSION: MARVELOUS CRAFT

Most sociologists treat machines (if they see them at all) as second class citizens. They have few rights. They are not allowed to speak. And their actions are derivative, dependent on the operations of human beings.

—John Law, *A Sociology of Monsters*

You can learn a lot from fooling around with old machines. A few years ago, a friend kindly let me prattle about philosophers and manmade marvels while we swapped out the clutch on an old BMW motorcycle. Eventually, fingers sore and patience exhausted by what must have seemed like long-dead abstractions, he interrupted my excited description of Nicole Oresme's mechanical universe, complaining that philosophy was not going to get the transmission bolted on by dinner, and "anyway, who reads the philosophers?"

Indeed, who? Surely not the legions of medieval craftsmen, performers, and court functionaries whose lives were lived in working proximity to the marvels of court life and civic display. And I suspect, in some cases, not even the writers from whose narratives I have culled the manmade marvels in this book. Others before me have bent to the task of sorting out the theologians and scholastics who first explored the psychology of wonder and hypothesized fantastic material *engins*. I am thankful to have been left the mechanic's task of combing through the bins of old parts to see what will run. It is my hope that, in some small way, the manmade marvels in these pages were made to run for you.

One of the implicit arguments of this book is the idea that manmade *mirabilia* and the wonder they inspired were transmitted through the experience of things, rather than via the abstractions of written authority. This is no mere conceit, for while it is obvious that the rich philosophical discussion of marvels and wonder predates manmade marvels by centuries, it is equally certain that most of the people who experienced these marvels did not associate them with philosophy. The nature of that experience is rooted in perspective, in the Gadamerian sense of individual or corporate

horizons contingent upon situated knowledge. This is the basis of the multiplicity of responses to *mirabilia* in the medieval period, for by the late Middle Ages, the singular causal force of divine will characterizing early medieval wonder had become fragmented, dispersed amongst a wide range of competing causes, as well as calculated interests, in the production of wonder.

Another thread involves the idea that marvels, having emerged from books and into tangible lived experience, worked effects upon the reinscription of marvelous imagery and the representation of responses to marvelous objects. Once we accept that some of the manmade marvels represented in texts actually came from the lived experience of medieval courtiers, craftsmen, and commoners, these devices can be seen to take on a life of their own, permeating into corners of the medieval experience formerly assumed to be reserved for literary genres. Just as late medieval texts display undercurrents of the crisis of chivalry brought on by material and political circumstance, these more rarefied marvels too display an epistemological crisis. Thanks to the self-consciousness forced by their embodiment, the material object that emerges from one text only to return to another cannot hold its initial textual form. Magic could remain magic in the transfer from one romance text to another, but once that magic was demoted from the preternatural to a material and ideological product, the thing or object gained the power to adulterate subsequent reinscription.

This is the basis of the readings in this book, each one an effort to come to terms with marvels as players in the social lives of a range of people, from court scientists and elite patrons, to the craftsmen who fed their families by making wonders. In between, there were men such as Langland, Chaucer, Gower, and Mandeville, each of whom bears witness to the multifarious cultural presence of manmade marvels. The cultural negotiation over the meaning of marvels occurred not only on the material level, but through the material marvels represented in texts proliferating in the period. Langland reproduced the pageant angel of the goldsmiths, giving a voice to the craftsmen and commons whose stake in Richard's kingship would otherwise go unheard. And although *mechanicalia* were represented in romance texts long before his birth, trans-class writers such as Chaucer brought their rather unique experiences with *mirabilia* to others through literature, by reconfiguring extant *genre* forms and age-old stories to accommodate new, ambivalent attitudes about the air of *neufangelnesse* accompanying the experience of mechanical marvels. Even in the *techne* of reemergent classical sciences such as alchemy, Chaucer finds room for a critique on the deception made possible through craft, suggesting that the reevaluation of marvels is intimately connected to the greater cultural movement toward a humanistic conception of craft, art, and science. Gower too displayed his anxieties about the

relationship between technological pursuits and social ills through comparison between the measure of Arion and the chaos of the marvel-saturated Alexander legend. Texts of Mandeville's *Travels* celebrated specifically commodified, mercantitized *mirabilia*, and honored the craftspeople who produced them in a narrative that nevertheless recognized the dangers of idolatry inherent in particular uses of manmade marvels. In each of these texts we see the interrelation of the textual and material in a dialogic negotiation in which *mirabilia* navigate their own place among others in the shaping of meaning. The diversity of these responses demonstrates the variability of approaches to marvels in the late medieval period; they are never one thing, but many at once dependent upon perspectives the devices themselves help to carve out. During this era, the *medio evo* or in-between time, marvels left the singular framework of divine cause to multiply meanings among the courts and streets of Europe.

The variety of outlooks on *mirabilia* in this period of flux only begin with the thought of the Latin schoolmen. This doctrinal background, available only to a select few, finds material expression in the artistic objects brought into being through the patronage of western European nobility. The stage was already set by centuries of thinking about marvels in romance, and through the ideas of men such as Roger Bacon, who imagined manmade marvels in pursuit of political position. But because of the interdependence of social strata in the production of manmade marvels, we must acknowledge that in this period *mirabilia* first pierced the boundaries of class through the fact of their production at the hands of the voiceless craftsmen, mechanics, and entertainers at the lower end of the social spectrum. This environment promoted a more widespread access to marvels, contributing to the process of naturalization and rationalization that eventually led medieval marvels to become mere stage effects, Renaissance collectors' items stuffed into wunderkammern, and finally, the lifeless and anatomized curios of the modern museum with which I began this book.

The idea of the marvel in late medieval culture augments the stuff of its classical heritage in teratology and otherworldliness. Taking on metaphors of divine oversight and worldly order, *mirabilia*—especially in their manmade incarnations—became symbolic of mankind's increasing mastery over nature. But within this shift, in between the classical and Renaissance paradigms, marvels also became metaphorical sites of anxiety over mankind's newfound agency over and subsequent moral culpability within Creation. The craft production of marvels for this elite market suggests that there were social and perhaps moral implications for the producers as well as the consumers of manmade *mirabilia*. Through them men were confronted with their own agency, as creators whose subjective reasoning could determine what was and what was not divine. For this key aspect in the development

of western subjectivity they risked their souls through the willful pursuit of activities closely associated with sins such as *idolatria* and *curiositas*. Medieval *mirabilia* thus take on deeply shaded moral valences even as they represent the birth of investigative paradigms that would remain unrealized—and largely unrecognized—until the scientific “revolutions” of the sixteenth and seventeenth centuries.

This raises still another idea about how people experienced marvels, the notion that postmedieval ideas about marvels and wonders have formed a distorted lens through which moderns—if we have ever been modern—look back on medieval marvels. The problem is in this rearward view, in seeing marvels located on the one hand in old romances, and on the other through the glass cases of museums. This bifurcation has imposed limits on *mirabilia* in general, and manmade marvels in particular. Manmade *mirabilia* and inquiries into cause call into question the basis of Renaissance science in a singular evolution from natural philosophy, ignoring *praxis* and *techne* in favor of *episteme*. The subject of medieval *mirabilia* incorporates the related paradigms of literature, theology, philosophy, craft, and politics, bringing into question the periodizing tendencies of our shared critical narratives. It suggests that a more self-reflexive critical attitude, combined with the ameliorating approach to history and science made available through critical approaches from the sociology of science, might help to fill in the blanks about what we know of medieval *mirabilia*. To adhere to a singular field or series of nominative taxonomies excludes the vast majority of the constituents that produce the ideological entity called a marvel, whether it be a deliberately chosen gift among nobles, a technologized motif from romance texts, or an image performed in the street and later inscribed to confer marvelous status upon an event.

My object here has been to balance the metaphors and lived experiences of the clockwork universe of the later fourteenth century, suggesting avenues for the consideration of the period’s vital and lively intercourse with *mirabilia*. Ultimately this project reflects the literary basis of my own training, which has allowed me to trace the extant remains of a class of objects that no longer exist, except in texts and as a few isolated artifacts locked away in museums. In opening this tiny Ricardian window into the medieval culture of manmade marvels, I hope others will take up the vast work that remains in the recovery and reevaluation of marvels under this paradigm, which suggests that manmade marvels operated not only as objects but as entities capable of exerting force in the hotly contested social arena of shifting ideologies and emergent technologies governing life in the later Middle Ages.

NOTES

Introduction: Clever Devices

1. Kipling, *Enter the King: Theatre, Liturgy, and Ritual in the Medieval Civic Triumph* (Oxford: Clarendon Press, 1998), pp. 79–83.
2. Arthur C. Clarke, “Clarke’s Third Law,” in *Profiles of the Future: An Inquiry into the Limits of the Possible* (New York: Harper & Row, 1962).
3. Francesa Massip, “The Cloud: A Medieval Aerial Device, Its Origins, and Its Use in Spain Today,” *EDAMR* 16, 1 (Spring 1994): 65–77.
4. Text translated from the *Crónica de Juan II*, Garcia de Santamaría, fol. 204, in *The Staging of Religious Drama in Europe in the Later Middle Ages*, ed. Peter Meredith and John E. Taliby, Early Drama, Art and Music monograph series 4 (Kalamazoo: Medieval Institute Publications, 1983), pp. 94–5.
5. It is to be hoped that the study of marvels will acquire the breadth of critical interest enjoyed by monster-study since Jeffrey Jerome Cohen’s work began to reinvigorate the field in 1996, resurrecting interest in John Block Friedman’s *sin qua non* assembly of lore on the topic, *The Monstrous Races in Medieval Art and Thought* (Cambridge: Harvard University Press, 1974); See Cohen’s “Seven Monster Theses,” in *Monster Theory: Reading Culture* (Minneapolis: University of Minnesota Press, 1996); *Of Giants: Sex, Monsters, and the Middle Ages* (Minneapolis: University of Minnesota Press, 1999); and, too recently for consideration in this book, *Hybridity, Identity and Monstrosity in Medieval Britain: Of Difficult Middles* (New York: Palgrave Macmillan, 2006).
6. Timothy Jones and David Sprunger, eds., *Marvels, Monsters and Miracles: Studies in the Medieval and Early Modern Imagination* (Kalamazoo: Medieval Institute Publications, 2002); Lorraine Daston and Kathrine Park, eds., *Wonders and the Order of Nature, 1150–1750* (New York: Zone Books, 1998); Mary Baine Campbell, *Wonder & Science: Imagining Worlds in Early Modern Europe* (Ithaca: Cornell University Press, 1999), and *The Witness and the Other World: Exotic European Travel Writing, 400–1600* (Ithaca: Cornell University Press, 1988); Caroline Walker Bynum, “Wonder,” *American Historical Review* 102, 1 (February 1997): 1–26.
7. Arjun Appadurai, ed., *The Social Life of Things: Commodities in Cultural Perspective* (Cambridge: Cambridge University Press, 1986), pp. 19–24; on the social “increment being sought [in prestige-based pre-industrial

- commodity exchange] is in reputation, name, or fame, with the critical form of capital for producing this profit being people,” p. 19.
8. For an early example, see Gerard Brett, “The Automata in the Byzantine ‘Throne of Solomon,’” *Speculum* 29 (1954): 477–87.
 9. See Daston and Park, *Wonders*, p. 94, for an extended discussion. Bacon’s devices were meant to secure patronage at the papal court of Clement IV, where he was to “play Aristotle to Clement’s Alexander.”
 10. I use the term in full appreciation of the framework established by Paula Findlen, in works such as “The Economy of Scientific Exchange in Early Modern Italy,” in *Patronage and Institutions*, ed. Bruce Moran (London: Boydell and Brewer, 1991), esp. pp. 5–7. Mechanical marvels were the instruments exchanged in the proto-scientific economy of wonder developed in the thirteenth- and flourishing in the fourteenth century, presaging the early modern period’s practice of exchanging scientific instruments as tokens that “participated in the complex system of honor and prestige that determined social identity” (p. 5).
 11. In addition to meetings such as the automaton tree and birds built for the Khan’s visit to Paris or the Throne of Solomon, both noted earlier, see J. D. North, “Opus quarundam rotarum mirabilium,” *Physica* 8 (1966): 337–72, documenting the thirteenth-century gift of a craft marvel from the sultan of Damascus to Emperor Frederick II.
 12. Arjun Appadurai, “Introduction: Commodities and the Politics of Value,” in *The Social Life of Things*, pp. 19–34.
 13. The concept of the legible body is treated in Judith Butler, *Gender Trouble*, passim.
 14. Georg Simmel, *The Philosophy of Money* (1907), trans. T. Bottomore and D. Frisby (London: Routledge & Kegan Paul, 1978), p. 73.
 15. Appadurai, *Social Life*, p. 31.
 16. Lesley Stern, “Paths that Wind through the Thicket of Things,” *Critical Inquiry* 28, 1 (Autumn 2001): 318.
 17. Only a few studies have attended to aspects of manmade *mirabilia* in the works of Ricardian authors, and we have Mary Flowers Braswell and Laura Hibbard Loomis to thank for the seminal work of bringing attention to some of the material aspects of literary symbolization.
 18. Studies focused upon these works include J. D. Bruce, “Human Automata in Classical Tradition and Medieval Romance,” *Modern Philology* 10 (1912–13): 511–26; Merriam Sherwood, “Magic and Mechanics in Medieval Fiction,” *Studies in Philology* 44 (1947): 567–92; John Cohen, *Human Robots in Myth and Science* (New York: Allen & Unwin, 1967), pp. 27–6; and most recently, E. R. Truitt, “‘Trei poëte, sages dotors, qui mout sorent di nigromance’: Knowledge and Automata in Twelfth-Century French Literature,” *Configurations* 12, 2 (Spring 2004): 167–93.
 19. Robert W. Hanning, “Engin in Twelfth-Century Romance: An Examination of the *Roman d’Enéas* and Hue de Rotelande’s *Iponedon*,” *Yale French Studies* 51 (1974): 82–101.

20. Hanning, "Engin," pp. 83–4; Stephen Perkinson, "Engin and Artifice: Describing Creative Agency at the Court of France, ca. 1400," *Gesta* 41 (2002): 51–67; Charles Muscatine, *Chaucer and the French Tradition* (Berkeley: University of California Press, 1957), pp. 41–57.
21. Truitt, "Trei poëte," p. 172.
22. Appadurai, *Social Life*, p. 31, on how royal demand creates a localized, dialogic social structure in which the material representation of desire—in the present discussion, the manmade marvel as a material token of intangible elite power—sets a variety of conditions for the perception of value.
23. *The Governance of Kings and Princes: John Trevisa's Middle English Translation of the "De Regimine Principum" of Aegidius Romanus*, ed. David C. Fowler, Charles F. Briggs, and Paul G. Remley (New York: Garland, 1997), p. 80.
24. Thomas of Britain, *Tristan*, trans. A. T. Hatto (New York: Penguin, 1960), pp. 315–6.
25. Anne Hagopian Van Buren, "Reality and Literary Romance in the Park of Hesdin," *Medieval Gardens* (Washington, D.C.: Dumbarton Oaks, 1986), p. 128.
26. Truitt, "Trei poëte," pp. 170–1, incl. ft.nt. 13, on the technical constraints that prevented widespread manufacture of *automata* before the end of the thirteenth century.
27. Daston and Park, *Wonders*, p. 95. Regarding the transition in *techne* literature, see Jane Andrews Aiken, "Truth in Images: From the Technical Drawings of Ibn Al-Razazz Al Jazari, Campanus of Novara, and Giovanni De'Dondi to the Perspective Projection of Leon Battista Alberti," *Viator* 25 (1994): 326–59.
28. Malcolm Vale, *The Princely Court: Medieval Courts and Culture in North-West Europe* (Oxford: Oxford University Press, 2001), pp. 281–3.
29. Maurizio Bettini, *The Portrait of the Lover*, trans. Laura Gibbs (Berkeley: University of California Press, 1999), p. 62; see also pp. 210–1 for a list of Pygmalion-like stories from the classics.
30. See Derek J. DeSolla Price, "Automata and the Origins of Mechanism and Mechanistic Philosophy," in *Science since Babylon* (New Haven: Yale University Press, 1961); Bruce, "Human Automata in Classical Tradition and Medieval Romance," pp. 511–26. The Virgil legend is given extensive treatment in Domenico Comparetti, *Vergil in the Middle Ages*, trans. E. F. M. Beneck (Hamden, Connecticut: Archon Books, 1966). Also of interest to the topic of human *automata* are Theodore Ziolkowski, *Disenchanted Images: A Literary Iconology* (Princeton: Princeton University press, 1977); and Kenneth Gross, *The Dream of the Moving Statue* (Ithaca: Cornell University Press, 1992).
31. Michael Camille, *The Gothic Idol: Ideology and Image-Making in Medieval Art* (New York: Cambridge University Press, 1989), pp. 317–37.
32. George Ovitt, Jr., *The Restoration of Perfection: Labor and Technology in Medieval Culture* (New Brunswick: Rutgers University Press, 1987), p. 51.
33. Ovitt, *Restoration of Perfection*, p. 53.
34. The definitive study of the relationship between spirituality and worldly decline is James M. Dean's *The World Grown Old in Later Medieval Literature*

- (Cambridge: Medieval Academy of America, 1997). For a discussion of Augustine's historiography in its doctrinal contexts, see pp. 39–47.
35. See *De civitate Dei*, 22.24, where Augustine lists the vast accomplishments of mankind, noting: “But even in our body, though it shares the mortality of the beasts, and is weaker than many of them, how great the goodness of God appears!” (Iam vero in ipso corpore, quamvis nobis sit cum belius mortalitate commune multisque earum repariatur infirmius, quanta Dei bonitas, quana providentia tanti Creatoris apparet!), *The City of God against the Pagans*, trans. William H. Green (Cambridge: Harvard University Press, 1972), pp. 330–1.
 36. Ovitt, *Restoration of Perfection*, p. 54.
 37. Augustine, *Confessions*, 10.35. The function of *curiositas* in relation to *mirabilia* is explored in chapters 4 and 5 in this book.
 38. Daston and Park, *Wonders*, p. 112. For a comprehensive outline of the contemporary attitude toward *mirabilia* among natural philosophers, see Bert Hansen, *Nicole Oresme and the Marvels of Nature: A Study of His De Causis Mirabilium with Critical Edition, Translation, and Commentary* (Toronto: Pontifical Institute of Medieval Studies, 1985).
 39. See the detailed analysis in chapter 3.
 40. Chenu, M.-D. *Nature, Man and Society in the Twelfth Century: Essays on New Theological Perspectives in the Latin West* (Chicago: University of Chicago Press, 1957), p. 43.
 41. Daston and Park, *Wonders*, pp. 123–4.
 42. Roger Bacon's *Letter Concerning the Marvelous Power of Art and of Nature Concerning the Nullity of Magic*, trans. Teney L. Travis (Easton, Pa.: Chemical Publishing Company, 1923), pp. 26–7.
 43. Daston and Park, *Wonders*, p. 124.
 44. Both words descend from the L. *mirari*, to wonder at, and are cognate with a variety of medieval vernacular Gmc. descendants of the IE. Word for *smile*.
 45. For a brief account of Augustine's treatment of marvels, see Jean Ceard, *La nature et les prodiges: l'insolite au XVI siècle, en France* (Geneva: Droz, 1977), pp. 21–9.
 46. Saint Augustine, *The City of God against the Pagans*, trans. Green, 21.8.
 47. For the purposes of this study I employ the critical terms marvel, wonder, and *mirabilia* (the term Augustine applies specifically to manmade marvels in *Confessions* 22) interchangeably according to scholarly norms, avoiding the term *miracula* except to denote phenomena with clear divine causation.
 48. See Jean-Claude Schmitt, *Ghosts in the Middle Ages: The Living and the Dead in Medieval Society*, trans. Teresa Lavender Fagan (Chicago: University of Chicago Press, 1998), pp. 79–80.
 49. Hansen, *Nicole Oresme and the Marvels of Nature*, p. 66, cites Adelard's disdain of his student's wonder at the question of thunder's origins, but appears to be misdirected in his perception of the philosopher's concern: *curiositas*, the desire for knowing. The inherent moral conflict in curiosity is addressed in the discussion of Bacon and Albertus Magnus; see Daston and Park, *Wonders*, pp. 123–33.

50. Elspeth Whitney, *Paradise Restored: The Mechanical Arts from Antiquity through the Thirteenth Century* (Philadelphia: American Philosophical Society, 1990), pp. 1–18.
51. The modern critical root of medievalists' dissatisfaction with this model of subjectivity is Jacob Burckhardt's Chapter 2, "The Development of the Individual," in *The Civilization of the Renaissance in Italy* (New York: Oxford, 1937), esp. pp. 71–5. For a counterpoint, see David Aers, "A Whisper in the Ear of Early Modernists; or, Reflections on Literary Critics Writing the 'History of the Subject,'" in *Culture and History, 1350–1600: Essays on English Communities, Identities and Writing*, ed. David Aers (Detroit: Wayne State University Press, 1992), pp. 177–203.
52. On flexible self-reflexive historiography, see David Wallace, *Chaucerian Polity: Absolutist Lineages and Associational Forms* (Stanford: Stanford University Press, 1997), p. xvii.
53. Eugene Weber, "Fairies and Hard Facts: The Reality of Folktales," *JHI* 42 (1981): 93–7; Joel T. Rosenthal, *Telling Tales: Sources and Narration in Late Medieval England* (University Park, Pennsylvania: Pennsylvania State University Press, 2003).
54. See chapter 2, in this book, for a detailed analysis of Chaucer's equine *automaton*; see also Clouston's addition to Fredrick J. Furnivall's *John Lane's Continuation of Chaucer's "Squire's Tale."* Ed. from the original ms. version of 1616, Douce 170, collated with its ms. revision of 1630, Ashmole 53, with Notes on the Magical Elements in Chaucer's "Squire's Tale," and Analogues, by W.A. Clouston, Chaucer Society, ser. 2, 26 (London: Chaucer Society, 1888, 1890) W. A. Clouston, "On the Magical Elements in Chaucer's Squire's Tale, with Analogues." Appended to *John Lane's Continuation of Chaucer's "Squire's Tale"*, ed. F. J. Furnivall for the Chaucer Society. 263–476. London: K. Paul, Trench, Trubner & Co., 1888, 1890; and Stith Thompson, *Motif-Index of Folk-Literature: A Classification of Narrative Elements in Folktales, Ballads, Myths, Fables, Mediaeval Romances, Exempla, Fabliaux, Jest-Books, and Local Legend* (Bloomington: Indiana University Press, 1989).
55. For example, LeGoff as discussed later, and Otto Mayr, *Authority, Liberty, and Automatic Machinery*, Chapter 1.
56. Daston and Park, *Wonders*, p.129.
57. Jacques LeGoff, *The Medieval Imagination*, trans. Arthur Goldhammer (Chicago: University of Chicago Press, 1988).
58. LeGoff, *Medieval Imagination*, p. 12.
59. More recent work avoids these problems by turning to the psychological qualities of wonder. Most comprehensive is the study of marvels and wonder by Lorraine Daston and Katherine Park, *Wonders and the Order of Nature, 1150–1750*, which has come to function as the modern scholar's resource book for medieval wonder. Due to the scope of their project, they are prevented from teasing out the veiled ideologies embedded in their many examples. Similarly, Mary Baine Campbell's *Wonder and Science*, a more self-reflexive but equally broad survey, stresses human perception as a way of

- containing the volume's truly spectacular scope. These and other recent studies have expanded the range of knowledge and interest in medieval *mirabilia* by addressing the broad range of marvels from classical antiquity through the early modern period, but the experiential shift around fourteenth-century manmade *mirabilia* has been left largely unexplored.
60. LeGoff, *Medieval Imagination*, p. 30.
 61. Bynum, "Wonder," p. 24.
 62. Chenu, *Nature, Man, and Society*, p. 14.
 63. Bruno Latour, *We Have Never Been Modern*, trans. Catherine Porter (Cambridge: Harvard University Press, 1993), passim, esp. pp. 55–69; see also Julian Yates, *Error, Misuse, Failure: Object Lessons from the English Renaissance* (Minneapolis: University of Minnesota Press, 2003), pp. 3–9.
 64. For issue-specific discussions of multivalent material signifiers, see Bill Brown, "Thing Theory," *Critical Inquiry* 28, 1 (Autumn 2001): 1–22; Bruno Latour, *We Have Never Been Modern*, pp. 51–62; Stephen B. Crofts Wiley, "Spatial Materialism: Grossberg's Deleuzean Cultural Studies," *Cultural Studies* 19, 1 (January 2005): 63–99, esp. 69–74.
 65. Brown, "Thing Theory," p. 4.
 66. Brown, "Thing Theory," p. 5.
 67. Camille, *Gothic Idol*, passim.
 68. Stern, "Paths that Wind through the Thicket of Things," p. 321.
 69. Camille, *Gothic Idol*, p. 252.
 70. Pamela O. Long, *Openness, Secrecy, Authorship: Technical Arts and the Culture of Knowledge from Antiquity to the Renaissance* (Baltimore: Johns Hopkins University Press, 2001), pp. 88–96.

Chapter 1 By Angel's Hand: "Piers Plowman" and London's Crowning Gesture

1. *The Governance of Kings and Princes: John Trevisa's Middle English Translation of the "De Regimine Principum" of Aegidius Romanus*, ed. David C. Fowler, Charles F. Briggs, and Paul G. Remley (New York: Garland, 1997), p. 80, my italics.
2. Lynn Staley, *Languages of Power in the Age of Richard II* (University Park, Pennsylvania: Pennsylvania State University Press, 2005), p. 5.
3. Richard Vaughan, *Philip the Good* (London: Boydell, 1970; 2002) see esp. Chapter 5, detailing the extent of Valois might projected through magnificent display.
4. Malcolm Vale, *The Princely Court: Medieval Courts and Culture in North-West Europe, 1270–1380* (Oxford: Oxford University Press, 2001), p. 250; Vale cites Thomas Da Costa Kaufman's work on the interpenetration of court life and urban culture, in *Court, Cloister, and City: The Art and Culture of Central Europe, 1450–1800* (Chicago: University of Chicago Press, 1995), esp. pp. 51–73.
5. Sherry Lindquist discusses the dispersed nature of arts production in these environments, in *Art from the Court of Burgundy, 1364–1419* (Cleveland, Ohio: Cleveland Museum of Art, 2004), pp. 171–4.

6. Vale, *The Princely Court*, pp. 248–9.
7. Kipling, *Enter the King*, p. 12 and n.17.
8. Brunetto Latini, *The Book of the Treasure (Li Livres dou Tresor)*, trans. Spurgeon Baldwin and Paul Barrette (New York: Garland, 1993), pp. 162–3.
9. E. R. Chamberlin, *The Count of Virtue; Giangaleazzo Visconti, Duke of Milan* (London: Eyre and Spottiswoode, 1965).
10. Anthony Emery, “Late-Medieval Houses as an Expression of Social Status,” *Historical Research* 78, 200 (May 2005): 151–2.
11. Daniel Hahn, *The Tower Menagerie* (New York: Simon & Schuster, 2003), pp. 61–2.
12. R. H. Jones, *The Royal Policy of Richard II: Absolutism in the Later Middle Ages* (Oxford: Blackwell, 1968), p. 144, suggests that Burley specifically tutored Richard on the importance of magnificence. For other sources on Giles of Rome’s influence upon Richard’s ideas of kingship, see Nigel Saul, *Richard II* (New Haven: Yale University Press, 1997), pp. 249–50 and “The Kingship of Richard II,” in *Richard II: The Art of Kingship*, ed. Goodman and Gillespie (Oxford: Oxford University Press, 1999), pp. 44–6.
13. For a discussion of the difficulties in ascertaining specific theoretical allegiances in Richard’s political practice, see John M. Theilmann, “Caught between Political Theory and Political Practice: ‘The Record and Process of the Deposition of Richard II,’” in *History of Political Thought* 24, 4 (Winter 2004): 606–9.
14. The context of mid-fourteenth-century doctrines of magnificence is outlined in A. D. Fraser Jenkins, “Cosimo d’Medici’s Patronage of Architecture and the Theory of Magnificence,” *Journal of the Warburg and Courtauld Institutes* 33 (1970): 162–70; and Louis Green, “Galvano Fiamma, Azzone Visconti, and the Revival of the Classical Theory of Magnificence,” *Journal of the Warburg and Courtauld Institutes* 53 (1990): 98–113; see Green, 98 ft.nt. 2 for the shifts in the use of the doctrine under fifteenth-century humanism.
15. Green, “Galvano Fiamma,” p. 103.
16. Green, “Galvano Fiamma,” pp. 101–2.
17. For a summary of Visconti identity-projection and political commerce with Richard’s court, see David Wallace, “Chaucer and Lombardy,” in *Chaucerian Polity: Absolutist Lineages and Associational Forms in England and Italy* (Stanford: Stanford University Press, 1997).
18. Ralph A. Griffiths, “The King’s Court during the Wars of the Roses: Continuities in an Age of Discontinuities,” in *Princes, Patronage, and the Nobility: The Court at the Beginning of the Modern Age*, ed. Ronald G. Asch and Adolf M. Birke (London: Oxford, 1991), pp. 41–67; Griffiths conditionally acknowledges the possibility that the shift began with Edward, but firmly acknowledges the role of Richard II in the development of courtly display, pp. 56–7.
19. Staley, *Languages of Power*, p. 78, and Crane, *The Performance of Self*, pp. 1–9, 23–7; Griffiths, “King’s Court,” p. 56.
20. Christine de Pizan, *Le Livre des fais et bonnes meurs du sage roy Charles V*, ed. S. Solente, 2 vols. (Paris: Champion, 1936–40).

21. Claire Richter Sherman, "Representations of Charles V of France (1338–1380) as a Wise Ruler," *Medievalia et Humanistica* NS. 2 (1971): 83–96 (84–6); Donal Byrne, "Rex Imago Dei: Charles V of France and the *Livre des propriétés des choses*," *Journal of Medieval History* 7 (1981): 97–113. Byrne emphasizes the degree to which Charles's patronage of manuscript production was meant to capitalize on the political value of the king's ownership, rather than the specific content of the books.
22. Byrne, "Rex imago dei: Charles V of France and the *Livre des propriétés des choses*," pp. 98, 107–8.
23. Anne Danieul-Cormier, *Wise and Foolish Kings: The First House of the Valois, 1328–1498* (New York: Doubleday, 1980), p. 142; for details on the Visconti library at Pavia, see chapter 3 in this book.
24. For discussion of the nature and implications of augury heads, see Kevin LeGrandeur, "The Talking Brass Head as a Symbol of Dangerous Knowledge in 'Friar Bacon' and in 'Alphonsus, King of Aragon,'" *English Studies* 5 (1999): 408–12.
25. Georges Chastellain, *Oeuvres*, 8 vols., ed. Kervyn de Lettenhove (Brussels: Académie royale de Belgique, 1863–66), iii, pp. 90–2, qtd. in Vaughan, *Philip the Good* (London: Boydell, 1970, 2002), p. 151.
26. Joan Evans, *Magical Jewels of the Middle Ages and the Renaissance* (Oxford: Clarendon Press, 1922), pp. 116–39.
27. For an excellent reading of the projection of aristocratic identity through the patronage of arts, see Michael Camille, "'For Our Devotion and Pleasure': The Sexual Objects of Jean, Duc de Berry," *Art History* 24 (2001): 169–94.
28. Daston and Park, *Wonders*, p. 74.
29. Evans, *Magical Jewels*, pp. 113–7.
30. Langland, PPL.B.ii.14.
31. Saul in *Richard II*, pp. 353–5 breaks from his usual restraint to describe the elaborate dress using an amusing extended metaphor of warfare, placing the entire matter in the context of Richard's debts to French courtly magnificence; Crane, *Performance of Self*, pp. 21–7, gives a lengthy analysis detailing the reciprocal signification of the clothing and other accoutrements involved.
32. See *Richard the Redeless and Mum and the Sothsegger*, ed. James M. Dean (Kalamazoo, Michigan: Medieval Institute Publications, 2000), pp. 4, 1–3.
33. Saul, *Richard II*, p. 369.
34. Chris Given-Wilson, *The Royal Household and the King's Affinity: Service, Politics, and Finance in England, 1360–1413* (New Haven: Yale University Press, 1986), pp. 270–1.
35. *The Works of Sir John Clanvowe*, ed. V. J. Scattergood (Cambridge: D.S. Brewer, 1975), p. 69.
36. Francis Palgrave, ed., *Antient Kalendars and Inventories of the Treasury of His Majesty's Exchequer*, 3 vols. (London: Record Commn., 1836), pp. iii, 309–61; Saul, *Richard II*, p. 354.
37. Patricia J. Eberle, "The Politics of Courtly Style at the Court of Richard II," in *The Spirit of the Court*, ed. Glyn S. Burgess and Robert A. Taylor

- (Cambridge: D.S. Brewer, 1985), p. 178; Susan Crane, *The Performance of Self: Ritual, Clothing, and Identity during the Hundred Years War* (Philadelphia: University of Pennsylvania Press, 2002), pp. 22–7 et passim.
38. Saul, *Richard II*, p. 344.
 39. Saul *Richard II*, pp. 339–40, from *WC* 138, *Eulogium* 378, 3.369; *Chron. Revolution* 68.
 40. See *Richard the Redelesse and Mum and the Sothsegger*, ed. Dean; John M. Bowers, *The Politics of Pearl: Court Poetry in the Age of Richard II* (Cambridge: D.S. Brewer, 2001), p. 78, has a concise account of the destruction of artifacts attesting to Richard's courtly splendor.
 41. Saul, *Richard II*, p. 355.
 42. Vaughan, *Philip the Good*, p. 151.
 43. Richard Maidstone, *Concordia (The Reconciliation of Richard II with London)*, trans. A. G. Rigg, ed. David Carlson (Kalamazoo, Michigan: Medieval Institute Publications, 2003): Appendix 3, p. 109.
 44. Maidstone, *Concordia*, pp. 110–28.
 45. See also Eberle, "Richard II and the Arts," pp. 173–7; and Saul, *Richard II*, p. 356.
 46. Maidstone, *Concordia*, p. 112. For a fuller treatment of Alexander's reputation and connection to the culture of manmade mirabilia, see chapter 4 in this book.
 47. Maidstone, *Concordia*, pp. 122–3.
 48. Maidstone, *Concordia*, p. 126.
 49. In addition to the work of C. M. Barron, Nigel Saul, and Patricia Eberle, see Marian Campbell, "'White Harts and Coronets': The Jewellery and Plate of Richard II," in *The Regal Image of Richard II and the Wilton Diptych*, ed. Dillian Gordon, Lisa Monnas, and Caroline Elam (London: Miller, 1997), pp. 95–114.
 50. Staley, *Languages of Power in the Age of Richard II*, p. 355; for the relationship between embodied practices and the textual politics of narrative, see Terry Threadgold, "Performing Theories of Narrative: Theorising Narrative Performance," in *The Sociolinguistics of Narrative*, ed. Joanna Thornborrow and Jennifer Coates, *Studies in Narrativity* 6 (Amsterdam: John Benjamins Publishing Co., 2005), pp. 263–8.
 51. Paul Strohm, *Politique: Languages of Statecraft between Chaucer and Shakespeare* (Notre Dame: University of Notre Dame Press, 2005), p. 8.
 52. *Moving Subjects: Processional Performance in the Middle Ages and Renaissance*, ed. Kathleen Ashley and Wim Hüskens, *LUDUS* 5 (Rodopi: Amsterdam and Atlanta, 2001), pp. 3–9.
 53. Gordon Kipling, "Richard II's 'Sumptuous Pageants' and the Idea of the Civic Triumph," in *Pageantry in the Shakespearean Theater* (Athens: University of Georgia Press, 1985), p. 88.
 54. T. F. Reddaway, *The Early History of the Goldsmiths' Company, 1327–1509* (London: Edward Arnold, 1975), p. 40.
 55. *Appendix I: The Appeal of Thomas Usk*, in *The Testament of Love*, ed. R. Allen Shoaf (Kalamazoo: Medieval Institute, 1998), ll., pp. 100–5; 134–35; in 1381

- Northampton would finally displace the long hegemony of the victualling guilds, replacing Mayor Nicolas Brembre.
56. See James Simpson, "*After Craftes Conseil clotheth yow and fede*": Langland and London City Politics, in *England in the Fourteenth Century*, ed. Nicholas Rogers, Harlaxton Medieval Studies, N.S., 3 (Stamford, 1993), p. 122; Walsingham, *Historia Anglicana*, ii.66; *Westminster Chronicle*, pp. 58–65; *Letter Book H*, pp. 183–94; and "Great Conduit (The)," in Westcheap, ed., *A Dictionary of London* (1918): "Brewers, cooks and fishmongers were specially assessed to contribute to these repairs on account of the amount of water they used for the purposes of their trades (Riley's Mem. p. 107), and in 1337 orders were made to restrain the waste of water of the conduit (ib. 200), while in 1345 it was further represented that the conduit being built for the use of rich and middling persons in the midst of the City, the water was not to be wasted by the brewers (ib. 225)."
 57. *The Early History of the Goldsmiths' Company 1327–1509*, by T.F. Reddaway, with *The Book of Ordinances 1478–83*, ed. L. E. M. Walker (London: Edward Arnold, 1975), p. 41.
 58. It was simply called "the Conduit," for the later appellation "great" was applied after the "Little Conduit" was built further west along the Chepe in 1389. In 1389 the broken cross near the church of St. Michael "atte Corn" was removed by the Chamberlain and a new conduit was ordered in its place, 13 Rich. II. (Cal. L. Bk. H. p. 342). Other references are as follows: "Lytyll Conduit in Chepe," Gregory's Chronicle (Cam. Soc.) under date, 1390–91 (p. 93). It is also mentioned in the rejoicings on the occasion of the Coronation of Henry VI. 1432 (*Chronicles of London*, ed. Kingsford, p. 112).
 59. Eilert Ekwall, "Introduction Chapter V: The Subsidies and the London Population: 3: Wards and Occupations," *Two Early London Subsidy Rolls* (Lund: C.W.K. Gleerup, 1951), pp. 81–7.
 60. PPL B.xix/C.xxi; see Simpson, "*After Craftes Conseil clotheth yow and fede*," p. 109, for the connection between the allegorical pentecostal image and the descent of a "theatrical angel from the roof of St. Paul's."
 61. All references to the B-text are from William Langland, *The Vision of Piers Plowman*, a Critical Edition of the B-Text Based on Trinity Cambridge MS B.15.17, 2nd ed., ed. A. V. C. Schmidt (New York: Everyman, 1978).
 62. Caroline M. Barron, "William Langland: A London Poet," in *Chaucer's England: Literature in Historical Context*, ed. Barbara Hanawalt (Minneapolis: University of Minnesota Press, 1993), pp. 96–7.
 63. Pearsall negates the idea of a democratic Langlandian view of the constitutional process, *Piers Plowman: The C-Text and Its Author* (Exeter: University of Exeter Press: 1978; 1994), p. 37.
 64. References tangent to Richard's political milieu include the Letter of Philippe de Mezieres to Richard II, in *A Letter to King Richard II: A Plea Made in 1395 for Peace between England and France*, ed. and trans. G. W. Coopland (Liverpool: Liverpool University Press, 1975), and the imagery in the Chronicle on Charles IV detailing the meeting of Charles V and Charles IV, treated in the Introduction to this book.

65. The iconography of the Heavenly Jerusalem in the pageant is discussed at length in Gordon Kipling's work; I use the term *palimpsest* in both the textual and geographic senses, to denote the geographic overwriting of varying levels of erasure and opacity as the scripted itinerary of the noble company moves over the multiplicity of narratives already present.
66. Leopold Legg, ed., *English Coronation Records*, PRO Close Roll I Ric.II mem. 45 briefly describes the event of the procession, noting only the noble and lesser military participants in Richard's retinue, instead focusing almost entirely upon the detailed wrangling for prominence within the processional troupe; the public aspects of the procession are virtually ignored, but are followed by an extensive and detailed account of the coronation at Westminster.
67. I would like to thank Lawrence Warner, of the University of Sydney, Australia, for discussion and comment on the locality, and for sharing his finding with respect to the Mercers Guild in his forthcoming article, "Adventurous Custance: St. Thomas of Acre and Chaucer's *Man of Law's Tale*," in *Place, Space, and Landscape in Medieval Narrative*, ed. Laura Howes (Knoxville: University of Tennessee Press, 2007).
68. DeCerteau refers to these as the contingent texts whose production and interpretation nevertheless bears witness to the primary narrative's "rhetorical operations of spatial phrasing," De Certeau, *Practice*, p. 102.
69. De Certeau, *Practice*, pp. 98, 106. In order to accept DeCerteau's free play of ideological possibility, even within the limits of culturally available interpretation, we must reject the implicit privilege de Certeau gives to the passersby. His analysis tacitly acknowledges the possibility of interactions between passersby but virtually ignores the implications of their strategies upon the supposedly inanimate geographies they pass, which in his critical discourse become the basis for counter readings against the implied social weight of the dominant historical text.
70. Legg, *English Coronation*, p. 164.
71. The source for specific expenditures by the Goldsmiths are available in Minute Books A+a and A+b, known as the Wardens Accounts and Court Minute Books, housed in the Goldsmith's Hall of the City of London. Lisa Jefferson's excellent edition, *Wardens' Accounts and Court Minute Books of the Goldsmiths' Mistery of London, 1334-1446* (Rochester: Boydell, 2003) details the 1377 coronation pageant expenditures, and she elaborates on the language of the records in "The Language and Vocabulary of the Fourteenth- and Early Fifteenth-Century Records of the Goldsmiths' Company," in *Multilingualism in Later Medieval Britain* (Rochester, N.Y.: D.S. Brewer, 2000), p. 180 and Appendix.
72. *Chronicon Angliae, ab anno domini 1328 usque ad annum 1388, auctore monacho quodam Sancti Albani*, ed. Edward Maunde Thompson, Rolls Series 64 (London: Longman, and Co., 1874), pp. 153-6; Maidstone, *Concordia*, Appendix I.
73. *The Anonimalle Chronicle 1333 to 1381*, ed. V. H. Galbraith (Manchester: Manchester University Press, 1927; rpt. 1970), pp. 107-8; translation from A. G. Rigg. See note 72 earlier for reference.

74. My formulation here aligns with the concept of space as narrative formulated by Julian Yates in *Error, Misuse, Failure: Object Lessons from the English Renaissance* (2003), anticipating the approach recently outlined in Mieke Bal's "Figuration," *PMLA* 119, 5 (October 2004): 1289–92.
75. Roy Strong, *Art and Power: Renaissance Festivals, 1450–1650* (Berkeley, 1984), p. 11.
76. James D. Stokes, "Processional Entertainments in Villages and Small Towns," in *Moving Subjects: Processional Performance in the Middle Ages and Renaissance*, ed. Kathleen Ashley and Wim Hüskens, *LUDUS* 5 (Rodopi: Amsterdam and Atlanta, 2001) p. 241, my emphasis.
77. George Unwin, *The Gilds and Companies of London* (London, Methuen & Co. 1908), p. 116.
78. Michel de Certeau, *The Practice of Everyday Life*, trans. Steven Rendall (Los Angeles: University of California Press, 1984), p. 93.
79. This contrasting account of the pageant, which I have outlined deliberately in the abstract, also describes the operation of Pierre Bourdieu's *Habitus*, a concept designed to break the barriers between synoptic and practiced perspectives of space, "an embodied, as well as cognitive, sense of place." Jean Hillier and Emma Rooksby, eds., *Habitus: A Sense of Place* (Burlington: Ashgate, 2002), p. 5.
80. Benson, ed., *The Riverside Chaucer*, CkT 13–18. Conversely, we may read in Chaucer's use of this figure in a negative estates portrait the emerging perspective of an orderly and rule-bound mercantile middle class.
81. Kipling, "Richard II's 'Sumptuous Pageants,'" notes the difference between participation through material contributions to a pageant and participation in the development of meaning, and further notes that the thematic consistency of the pageants of Richard's time undermines the idea that they are "haphazard products of a trade symbol here, a warmed-over miracle play there, and a tournament castle further on," pp. 87–9.
82. I would like to thank Lisa Jefferson of Oxford University for discussion and comment regarding the construction, financing, and other material details of the pageant, and for sharing prepublication details from her invaluable and since well-received edition, *Wardens' Accounts and Court Minute Books of the Goldsmiths' Mistery of London*.
83. "Beneath the discourses that ideologize the city, the ruses and combinations of powers that have no readable identity proliferate; without points where one can take hold of them, without rational transparency, they are impossible to administer," de Certeau, p. 95.
84. Yates, *Error, Misuse, Failure: Object Lessons*, p. 21.
85. Reddaway, *The Early History of the Goldsmiths' Company*, p. 40.
86. For positions on the radical approach, see the unpublished dissertation by Stephen Stallcup, 38ff, and Baldwin (1981) 13 on limited monarchy, as well as Donaldson's 1966 analysis of the term commons, which he finds to mean community in the local sense.
87. Interpretations of capital expenditure—symbolic, social, economic, and so on—require localized analysis and thick description; only thus can we begin

to overcome the tyranny of distance that allows the textual record to eclipse the pre-discursive existence of the actor-agents, an historical fallacy to which literary critics (like myself) often fall prey.

88. Gaunt's commission was titled *Processus factus ad coronacionem domini Regis Anglie Ricardi secundi post conquestam anno regni sui primo*, ed. L. G. W. Legg as *English Coronation Records* (London, 1901); for full details of Richard's investment in the text, as well as the textual history, see Patricia J. Eberle, "Richard II and the Literary Arts," in *Richard II: The Art of Kingship*, ed. Goodman and Gillespie (Oxford: Clarendon Press, 1999), p. 234; and Saul, *Richard II*, p. 364, ft.nt. 130.

Chapter 2 Chaucer and the Culture of Commodified *Mirabilia*

1. Laura L. Hines, *Chaucer's Gardens and the Language of Convention* (Gainesville: University Press of Florida, 1997), pp. 23–8.
2. Geoffrey Chaucer, *The Riverside Chaucer*, ed. Larry D. Benson, 3rd ed. (Boston: Houghton Mifflin, 1987). All subsequent references to Chaucer's works are from this edition.
3. Lorraine Daston and Katharine Park, *Wonders and the Order of Nature 1150–1750* (New York: Zone Books 1998), p. 91.
4. I refer to sequences such as Mandeville's interpolated inquiry into the operation and production of courtly marvels, in his transmission of source material from Odoric of Pordenonne. *Mandeville's Travels*, ed. Seymour (Oxford: Clarendon 1967), p. 157.
5. The successor to this notion of exchange is outlined by Paula Findlen, "The Economy of Scientific Exchange in Early Modern Italy," in *Patronage and Institutions*, ed. Bruce Moran (London: Boydell and Brewer, 1991), pp. 5–7.
6. Magical *automata* abound in medieval romances and are discussed in Merriam Sherwood, "Magic and Mechanics in Medieval Fiction," *Studies in Philology* 44 (1947): 567–92; Michael Camille, *The Gothic Idol: Ideology and Image-Making in Medieval Art* (New York: Cambridge University Press, 1989), pp. 242–58; William Eamon, "Technology as Magic in the Late Middle Ages and the Renaissance," *Janus* 70 (1983): 171–212; Gerard Brett, "The *Automata* of the Byzantine Throne of Solomon," *Speculum* 29 (1954): 477–87; for a translation of Benoît's account of automaton, see Penny Sullivan, "Medieval *Automata*: The 'Chambre de Beautés' in Benoît's *Roman de Troie*," *Romance Studies* 6 (1985): 1–20.
7. Wunderkammern and Kunstschränk preserve in their etymology and genealogy a connection between the artificial *mirabilia* of romance and the early expressions of a documentary mentality that would eventually produce the early European anatomy theaters and eventually the museum. See Paula Findlen's "The Museum: Its Classical Etymology and Renaissance Genealogy," *Journal of the History of Collections* 1 (1989): 59–78, and *Possessing Nature: Museums, Collecting, and Scientific Culture in Early Modern Italy* (Berkeley: University of California Press, 1994); for a delightful account of

- the *mentalité* informing Wunderkammern, see also Lawrence Weschler, *Mr. Wilson's Cabinet of Wonder* (New York: Pantheon, 1995).
8. John Finlayson, "The Marvellous in Middle English Romance," *Chaucer Review* 33 (1999): 403–5.
 9. See pp. 19–22, Chapter 1 in this book.
 10. Joyce Tally Lionarons, "Magic, Machines, and Deception: Technology in the *Canterbury Tales*," *Chaucer Review* 27 (1993): 377–86.
 11. Lynn Thorndyke, *A History of Magic and Experimental Science*, v. 2 (New York: Macmillan, 1929): 969–70; Bert Hansen, ed., *Nicole Oresme and the Marvels of Nature: The De causis mirabilium* (Toronto: Pontifical Institute of Medieval Studies, 1985), p. 51, n. 3.
 12. Hansen, *Nicole Oresme and the Wonders of Nature*, p. 9, 67.
 13. A. C. Crombie, *Science, Art and Nature in Medieval and Modern Thought* (London: Hambledon Press, 1996), pp. 81–2.
 14. Camille, *Gothic Idol*, p. 248 refers to *automata* condemned as demonic objects in the Neuremberg Chronicle of 1398, and his first chapter outlines the connections between craftworks such as *automata* and the sin of idolatry. Chapter 6 addresses the sins associated with crafting mechanical *mirabilia*; Lloyd (note 37 later) discusses several examples of ecclesiastical uses of mechanical *automata* in cathedrals, and includes a diagram and photographs of the mechanical cock from the Strasburg Cathedral clock, ca. 1352, pp. 7–13; the *Sketchbooks* of Villard de Honnecourt offer detailed plans for the construction of mechanical *automata* to adorn church edifices.
 15. R. W. Symonds, *A Book of English Clocks*, rev. ed. (London: Penguin, 1950), pp. 12–3. Historical records of these clocks appear in R. P. Howgrave-Graham, "Some Clocks and Jacks, with Notes on the History of Horology," *Archaeologia* lxxvii (1928), and C. F. C. Beeson, *English Church Clocks, 1280–1850* (Antiquarian Horological Society, 1971); Gerhard Dohrn-Van Russom, *The History of the Hour: Clocks and Modern Temporal Orders*, trans. Thomas Dunlap (Chicago: University of Chicago Press, 1996).
 16. Derek J. Price, "The Equatorie of the Planetis," *Journal of the S.W. Essex Technical College and School of Art* 3 (1952): 154–68, and ed., *The Equatorie of the Planetis* (Cambridge: Cambridge University Press, 1955); Kari Anne Rand Schmidt, *The Authorship of the Equatorie of the Planetis* (Cambridge: D.S. Brewer, 1993). Ambiguities in linguistic and orthographic evidence leave precise attribution of authorship for the *Equatorie* inconclusive, but the enduring critical willingness to accept Chaucer's authorship rests largely on supporting evidence of his technical inclinations and his associations with Oxford astronomers.
 17. Sigmund Eisner, "Chaucer as a Technical Writer," *Chaucer Review* 19, 3 (1985): 179–201.
 18. For a discussion of technological self-consciousness in *The Former Age*, see Andrew Galloway, "Chaucer's 'Former Age' and the Fourteenth-Century Anthropology of Craft: The Social Logic of a Premodernist Lyric," *ELH* 63 (1996): 535–53.

19. *The Riverside Chaucer*, p. 917. Benson points to the burlesques generated in imitation of Chaucer by Dunbar and Drayton.
20. William D. Wixom, *Treasures from Medieval France* (Cleveland: Western Reserve University Press, 1967), pp. 250–1, Plate 18.
21. Guillaume de Machaut, *Le Judgement du roy de Behaigne and Remede de Fortune*, ed. James I. Wimsatt and William W. Kibler (Athens, Georgia: Chaucer Library, 1988), pp. 212–3, editor's translation.
22. Martin M. Crow and Claire C. Olson, eds., *Chaucer Life Records* (Oxford, 1966), pp. 42–8; Derek Pearsall, *The Life of Geoffrey Chaucer* (Oxford: Blackwell, 1992), pp. 68, 104–5.
23. Anne Hagopian van Buren, "Reality and Literary Romance in the Park of Hesdin," *Medieval Gardens* (Washington: Dumbarton Oaks, 1986), pp. 117–21.
24. Anne Hagopian Van Buren, "Reality and Literary Romance," pp. 131–2; see also Naomi Miller, "Paradise Regained: Medieval Garden Fountains," pp. 135–53 in the same volume.
25. Derek de Solla Price and Silvio A. Bedini, "Automata in History: Automata and the Origins of Mechanism and Mechanistic Philosophy" and "Automata in the History of Technology," *Technology and Culture* 5 (1964): 29–31, 33–4.
26. Van Buren offers a comprehensive analysis of the historical scope of the grounds, gardens, and marvels installed at Hesdin by Robert, Comte d'Artois; see also Sherwood, "Magic and Mechanics," p. 589; and Camille, *The Gothic Idol*, pp. 247–8.
27. Laura Hibbard Loomis, "Secular Dramatics in the Royal Palace, Paris, 1378, 1389, and Chaucer's 'Tregetoures,'" *Speculum* 33 (1958): 242–55.
28. On Chaucer's association with Guichard D'Angle, noted by Froissart. Richard Firth Green, *Poets and Princepleasers: Literature and the English Court in the Late Middle Ages* (Toronto: University of Toronto Press, 1980), p. 25. Guichard, a Poitevin who threw his allegiance with the English after being captured at Poitiers, had been Richard's training master in the 1370s. He was made earl of Huntingdon at Richard's coronation (see CP vi.650–3; T. F. Tout, *Chapters in the Administrative History of Medieval England*, 6 vols. (Manchester: 1920–33), iii, pp. 325–6. D'Angle was sent to Paris on secret business of the Prince in the first half of 1377 (see Tout, Chapter iv.190–1, and Saul's ref to Echequer accounts, 18ft.nt.37).
29. Bib. Nat. Fr.2813.f.473v.; Peter F. Ainsworth, *Jean Froissart and the Fabric of History: Truth, Myth, and Fiction in the "Chroniques"* (Oxford: Oxford University Press, 1990), pp. 68–9 and Appendix of MS facsimiles. I concur with Ainsworth's assertions about the ideologically charged nature of chronicle accounts, although he overlooks the significance of depicting the marvelous performance in the portrait of the emperor in Bib.Nat.Fr.2813.f.473v.
30. Loomis, "Secular Dramatics," p. 244, offers this textual parallel to reinforce an argument centered on stagecraft, citing several late medieval instances of staged boats in n. 23. Regarding Chaucer's movements, see Crow and Olsen, *Chaucer Life Records*, pp. 203–4.

31. Roger Bacon's *Letter Concerning the Marvelous Power of Art and of Nature Concerning the Nullity of Magic*. Trans. Teney L. Travis (Easton, Pennsylvania: Chemical Publishing Company, 1923), p. 29.
32. Pearsall, *The Life of Geoffrey Chaucer*, pp. 102–3, describes Chaucer's encounter with the humanist culture of the Italian city-states, among which Milan included a wealth of architectural and engineering marvels as well as typical courtly clockwork *automata*; Cf. E. R. Chamberlin, *The Count of Virtue: Giangaleazzo Visconti, Duke of Milan* (London: Eyre & Spottiswoode, 1965), pp. 42–3.
33. *La Bibliothèque des Visconti et des Sforza, Ducs de Milan, au XVe Siecle*, ed. Elisabeth Pellegrin (Paris: Services du Publications du C.N.R.S., 1955).
34. Silvio A. Bedini and Francis R. Madison, "Mechanical Universe: The Astrarium of Giovanni di Dondi," *Transactions of the American Philosophical Society* 56 (1966): 19–21. I would like to thank Silvio Bedini, Curator Emeritus of the Smithsonian Museum of History and Technology and former caretaker of the Astrarium for his insightful expansion on his published material on *automata*. He has stressed the widespread fame of such devices in locations such as Hesdin and in Lombardy, confirming my hypothesis that in his adjunct ambassadorial role Chaucer would have been familiar with both Di Dondi and the marvelous Astrarium.
35. Bedini and Madison, "Mechanical Universe," pp. 5–13; Linne R. Mooney, "The Cock and the Clock: Telling Time in Chaucer's Day," *SAC* 15 (1993): 91–109.
36. Penelope Reed Doob, *The Idea of the Labyrinth from Classical Antiquity through the Middle Ages* (Ithaca: Cornell University Press, 1990), pp. 308–10; Mary Flowers Braswell, "Architectural Portraiture in Chaucer's 'House of Fame,'" *JMRS* 11, 1 (1981): 101–12; and Laura Kendrick, "Chaucer's 'House of Fame' and the French Palais de Justice," *SAC* 6 (1984): 121–33.
37. Chaucer's connections to Merton College are documented in J. A. W. Bennett, *Chaucer at Oxford and at Cambridge* (Oxford: Clarendon Press, 1974), and in Pearsall's biography, p. 333, n. 12. The definitive study of the clockworks is by John David North, *Richard of Wallingford: An Edition of His Writings* (Oxford: Clarendon Press, 1976), see vol. 2, 361–70, and more recently, his *God's Clockmaker: Richard of Wallingford and the Invention of Time* (London: Hambledon & London, 2005). See also H. Alan Lloyd, *Some Outstanding Clocks over Seven Hundred Years 1250–1950* (London: Leonard Hill Ltd., 1958), pp. 6–20.
38. Hines, *Chaucer's Gardens and the Language of Convention*, p. 24.
39. D. Vance Smith, *The Arts of Possession: The Middle English Household Imaginary* (Minneapolis: University of Minnesota Press, 2003), p. 43.
40. Cf. Boccaccio, *Decameron* 10.5, an analogue in which the marvelous element is used as a comic aside in the narrative, compared to Chaucer's elaboration on the magical elements, which acquires the scope of a full secondary plot element.
41. R. W. Lightbown, *Secular Goldsmiths' Work in Medieval France: A History* (London: Society of Antiquaries, 1978), p. 50.

42. On natural forces and astronomy in the Franklin's Tale see Chauncey Wood, "Of Time and Tide in the 'Franklin's Tale,'" *Philological Quarterly* 45 (1966): 688–711; ironically, recent attention to the matter of Chaucer's understanding of natural forces has been revived by scientists Don Olson and Edgar Laird, in *Sky and Telescope* 99 (April 2000): 44–5, who argue that Chaucer's portrayal of astronomical calculation suggests he was aware of a high tidal configuration that occurred in 1340.
43. Frank Klaassen, "English Manuscripts of Magic, 1300–1500: A Preliminary Survey," in Claire Fanger, ed. *Conjuring Spirits: Texts and Traditions of Medieval Ritual Magic* (London: Sutton Publishing, 1998), pp. 3–25. Klaassen provides a revealing MS-collection basis for an assessment of popular interest in magic, citing this significant division between the major "schools" of magical practice.
44. Girard d'Amiens, *Le roman du Cheval de Fust: ou, de Meliacin*, ed. Paul Aebischer (Geneva: Droz, 1974), and Margaret Munroe Boland, *Cleomadès: A Study in Architectonic Patterns* (Oxford: University of Mississippi, 1974); *Cleomadès* contains the closest analogue, a magical ebony horse controlled by moving steel hairs.
45. For a comprehensive discussion of analogues for the marvels in the Squire's Tale, see W. A. Clouston, *Notes on the Magical Elements of Chaucer's "Squire's Tale" and Analogues*, ser. 2, no. 26 (London: Chaucer Society, 1890).
46. John Lydgate in the *Troy Book* subsequently picks up on the mechanistic aspects of Chaucer's vocabulary for the brass horse. See my note "Lydgate's 'Stede of Bras,' A Chaucerian Analogue in *Troy Book* IV," *English Language Notes* 38, 3 (March 2001): 33–40.
47. LeGoff, *The Medieval Imagination*, p. 12.
48. Eamon, "Technology as Magic in the Late Middle Ages and the Renaissance," pp. 171–86.

Chapter 3 Chaucer's Body: The Subject of Technology

1. *Android Epistemology*, ed. Kenneth M. Ford, Clark Glymour, and Patrick Hayes (Cambridge: Massachusetts Institute of Technology Press, 1995), p. xi.
2. Clifford Geertz, "Centers, Kings, and Charisma: Reflections on the Symbolics of Power," in *Local Knowledge* (New York: Basic Books, 1983), pp. 122–7.
3. Otto Mayr, *Authority, Liberty & Automatic Machinery in Early Modern Europe* (Baltimore: Johns Hopkins University Press, 1986).
4. Guillemette Bolens and Paul Beckman Taylor, "Chess, Clocks, and Counsellors in Chaucer's 'Book of the Duchess,'" *Chaucer Review* 35, 3 (2001): 282.
5. Françoise Paheau, "Scientific Allusion and Intertextuality in Jean Froissart's *Li Orloge Amareuse*," *Journal of Medieval and Renaissance Studies* 20 (1990): 271. Paheau emphasizes Froissart's tendency to interpret technology according to the naturalized understanding of magic required to present the poet as *magus*.

6. Qtd. in Paheau, p. 264; Charles Dahlberg, trans., *The Romance of the Rose* (New Jersey: Princeton University Press, 1971), p. 343.
7. John V. Fleming construes the entire Pygmalion story as idolatrous in content in *The Roman de la Rose: A Study in Allegory and Iconography* (Princeton: Princeton University Press, 1969), pp. 228–31; Michael Camille in *Gothic Idol* interprets this episode as a reconfiguration of classical ideas of artistic self-consciousness, pp. 324–5.
8. Marilyn Desmond and Pamela Sheingorn, *Myth, Montage, & Visuality in Late Medieval Manuscript Culture: Christine de Pizan's Epistre Othea* (Ann Arbor: University of Michigan Press, 2001), p. 81.
9. Desmond and Sheingorn, *Myth, Montage, & Visuality in Late Medieval Manuscript Culture*, pp. 81–4 connect this manner of portrayal in the Pygmalion story to Christine's critical projection of ideal chivalric behavior, but as I have noted, Christine deserves credit for her educated understanding of *techne* and of court performance. Once again the automated statue and the idea of courtly conduct circulate closely, perhaps an artifact of the disciplinary nature of *automata* in early romances; see E. R. Truitt in my Introduction, p. 8.
10. Virginia Wylie Egbert, "Pygmalion as Sculptor," *Princeton University Library Chronicle* 28 (1966–67): 20–3.
11. Desmond and Sheingorn, *Myth, Montage, & Visuality in Late Medieval Manuscript Culture*, p. 79; see p. 278 ft.nt.60 for a list of MSS.
12. See Dahlberg, *The Romance of the Rose*, ft.nt. 6, earlier.
13. Guillemette Bolens and Paul Beckman Taylor, "Chess, Clocks, and Counsellors in Chaucer's 'Book of the Duchess,'" p. 284.
14. Paul Strohm, *Social Chaucer* (Cambridge: Harvard University Press, 1989), pp. 13–23.
15. The extensive literature on these themes in *The Former Age* is summed up in reference to Chaucer's political situatedness; see Norton-Smith, MAE 32 (117–24), and more recently, Andrew Galloway, "Chaucer's 'Former Age' and the Fourteenth-Century Anthropology of Craft: The Social Logic of a Premodernist Lyric," *ELH* 63 (Baltimore: Johns Hopkins, 1996): 535–40.
16. Dean, *The World Grown Old*, p. 95 details the relationships between the poems.
17. The Gymnosophae appear in many versions of the epistolary exchanges between Alexander and Aristotle. John Block Friedman, *Monstrous Races in the Middle Ages* (Cambridge: Harvard University Press, 1981), pp. 167–9 notes particularly the antitechnological lifestyle of the naked sages; David Williams, in *Deformed Discourse: The Function of the Monster in Mediaeval Thought and Literature* (Montreal: McGill-Queen's University Press, 1996), notes the significance of the negative formula used by the Gymnosophae, pp. 270–2.
18. Galloway's helpful analysis of the vocabulary is ambivalent regarding the complicit ironies around technology that I believe are revealed by the framing themes of *mechanicalia* and *mirabilia*. In the context of Chaucer's demonstrated

- interactions with the wonders of court life, it is further possible that the emphasis on rich foodstuff forms a submerged critique of Ricardian magnificence, as exemplified in the young monarch's well-documented engagement with fine table and associated gesture and social forms; see the scholarship on his possession of *The Forme of Curry* and Saul's numerous references to Richard's innovative table manners in *Richard II*.
19. Elaine Scarry, *The Body in Pain: The Making and Unmaking of the World* (Oxford: Oxford University Press, 1985); David Wills, *Prosthesis* (Stanford: Stanford University Press, 1995); Kirby Farrell, "Thinking through Others," *Massachusetts Review* 37 (1996): 213–35.
 20. Chaucer's father was a vintner, and his grandparents were pepperers. See Derek Pearsall, *The Life of Geoffrey Chaucer* (Cambridge: Blackwell, 1992), pp. 11–7.
 21. There is also a literal quality to the monstrosity of Nimrod, who is characterized as a giant in *De civitate Dei* 16.3; for the doctrinal genealogy of Nimrod as a monster, see Dean, *The World Grown Old*, p. 136.
 22. Dean, *The World Grown Old*, p. 276, analyzes the literary politics of the poem, finding the idea of political and material concerns unconvincing. My reading suggests that the poet's social concerns, technical inclinations, and apparent concern with the implications of *techne* on humankind's interactions with creation complement Chaucer's Boethianism.
 23. Brian Stock, "Science, Technology, and Economic Progress in the Early Medieval West," in *Science in the Middle Ages*, ed. David C. Lindberg (Chicago: University of Chicago Press, 1978), p. 47; Stock's phrase is attractive for the extra-philosophical latitude he brings to the period's nascent empiricism, securing the philosophical underpinnings of M. D. Chenu's "mechanism minded" late medieval world. See also Richard Utz, ed., *Literary Nominalism*, Introduction.
 24. Linne R. Mooney, "The Cock and the Clock," pp. 91–4. Mooney refers to the frequency of citation of clocks in Chaucer and contemporary calendars, acknowledging the rarity of the device, still accounted a marvel at this time. Dohrn-Van-Rossum's excellent history of ideas approach to mechanical time, *The History of the Hour*, is dismissive of the *automata* and other manmade *mirabilia* associated with clockwork, largely due to his sole focus on patterns of technological innovation specifically related to timekeeping, rather than individual instances of reception.
 25. Staley, *Languages of Power*, p. 143 makes the connection between the *NPT* portrait of Chauncicleer and the magnificence self-image of Richard II.
 26. Camille, *The Gothic Idol*, p. 249.
 27. The extensive scholarship on Chaucer and astronomy is too great to catalogue here, but is anchored in the works of Walter Clyde Curry, *Chaucer and the Medieval Sciences*, 2nd ed. (New York: Barnes and Noble, 1960); Sigmund Eisner, *Variorum Edition of the Works of Geoffrey Chaucer 6: A Treatise on the Astrolabe* (University of Oklahoma Press, 2002) and ed., *The Kalendarium of Nicholas of Lynn* (Athens: University of Georgia Press, 1980); J. D. North, *Chaucer's Universe* (Oxford: Oxford University Press, 1988); and Chauncey

- Wood, *Chaucer and the Country of the Stars: Poetic Uses of Astrological Imagery* (Princeton, N.J.: Princeton University Press, 1970). Jennifer Arch, "A Case against Chaucer's Authorship of the Equatorie of Planetis," *Chaucer Review* 40, 1 (2005): 64–6 lays out the likelihood of multiple users of equatories in London in Chaucer's time; the British Museum houses an extensive collection of astronomical instruments bearing the hart symbol of Richard II.
28. Chiara Frugoni, *Books, Banks, Buttons, and Other Inventions from the Middle Ages*, trans. William McCuaig (New York: Columbia University Press, 2003), pp. 92–3.
 29. Ian Bishop, "The Nun's Priest's Tale and the Liberal Arts," *Review of English Studies* New Series 30.119 (August 1979): 259.
 30. A. C. Crombie, *Science, Art and Nature in Medieval and Modern Thought* (London: Hambledon Press, 1996), pp. 81–2.
 31. Robert A. Pratt, "Some Latin Sources of the Nonnes Preest on Dreams," *Speculum* 52 (1977): 538–70. Benson, *Riverside Chaucer*, n. 937.
 32. Shiela Delany, *Chaucer's House of Fame: The Poetics of Skeptical Fideism* (Chicago: University of Chicago Press, 1972) is the primary work for the discussion of Chaucer and skeptical thinking based in nominalism.
 33. Benson notes Bartholomeus Anglicus, *De proprietatibus rerum* 7.39, tr. Trevisa 1.386–88; see also Curry, *Chaucer and the Mediaeval Sciences*, pp. 226–7.
 34. Robert A. Pratt, "Some Latin Sources of the Nonnes Preest on Dreams," *Speculum* 52 (1977): 538–70.
 35. Macrobius appears more consistently in Chaucer's works than any other dream-authority, perhaps due to the singular uses of his *Commentary*; see *Nun's Priest's Tale* 1.3123, *Book of the Duchess* 1.284, *Parliament of Fowles* 1.111, and *Romaunt A* 7.
 36. Pratt, "Some Latin Sources," p. 545n. Probable source is Raimundi de Biterris' *Liber Kalilae et Dimnae*.
 37. Curry, *Chaucer and the Mediaeval Sciences*, pp. 228–32.
 38. Pratt, "Some Latin Sources," pp. 547–8.
 39. Canto 29, *The Inferno of Dante*, trans. Robert Pinsky (New York: Farrar, Strauss, Giroux, 1994), pp. 311–3.
 40. Bodleian MS Holkham Misc. 48, p. 45, Dante, *Divine Comedy*, Italian, 3rd quarter, fourteenth century.
 41. Stanton J. Linden, *Darke Hieroglyphicks: Alchemy in English Literature from Chaucer to the Renaissance* (Lexington: University of Kentucky, 1996), p. 24.
 42. Sheila Delany, *Medieval Literary Politics: Shapes of Ideology* (New York: Manchester University Press, 1990), p. 16.
 43. James M. Dean, "Dismantling the Canterbury Book," *PMLA* 100 (1984): 751.
 44. Lee Patterson, "Perpetual Motion: Alchemy and the Technology of the Self," *Studies in the Age of Chaucer* 15 (1993): 31.
 45. William Newman, "Technology and Alchemical Debate in the Late Middle Ages," *ISIS* 80 (1989): 424–5. More recently, Newman has developed a formidable approach to Alchemy's engagement with nature and art in *Promethean Ambitions: Alchemy and the Quest to Perfect Nature* (Chicago: University of Chicago Press, 2004).

46. Robert Schuler, "The Renaissance Chaucer as Alchemist," *Viator* 15 (1984): 305–7.
47. For discussions of the negative implications of alchemy as *techne*, see Patterson, "Perpetual Motion," p. 50, and Mark J. Bruin, "Art, Anxiety, and Alchemy in the *Canon's Yeoman's Tale*," *Chaucer Review* 33 (1999): 33.
48. Alchemy was entering an especially precarious period in England in the later fourteenth century, as evidenced in Will G. Ogrinc's "Western Society and Alchemy, 1200–1500," *Journal of Medieval History* 6 (1980): 103ff., detailing the 1403 ban occasioned by the widespread perception of frauds committed by alchemists.
49. See chapters 1 and 2, in this book, for a discussion of social perspective relating to Hesdin and like technical marvels.
50. Latour's suggestion for noting the operation of agents in heterogeneous cultural negotiations, applied to the narrative agency with which literary characters are imbued, offers additional ideological evidence of bias to support the linguistic and narrative material I have construed for my argument.
51. Linden, *Darke Hieroglyphicks*, p. 24.
52. Chaucer, CYT l.1396.
53. It is upon these last fifty-four lines in the CYT that Chaucer's reputation as an early alchemist rests. See Schuler, "Renaissance Chaucer as Alchemist," in note 46.
54. George Lyman Kittredge, *Chaucer and His Poetry* (Cambridge: Harvard University Press, 1951), p. 15, confirms the majority opinion that Chaucer was skeptical of alchemical practices; for issues of the dehumanizing aspects of alchemy see John Speirs, *Chaucer the Maker* (London: Faber and Faber, 1951), pp. 96–7; Charles Muscatine, *Chaucer and the French Tradition: A Study in Style and Meaning* (Berkeley: University of California Press, 1957), pp. 213–5; and Paul G. Ruggiers, *The Art of the Canterbury Tales* (Madison: University of Wisconsin Press, 1965), pp. 132–4, who differentiates between Chaucer and the Yeoman, but who like many scholars fails to acknowledge the responses of "readers" of alchemy built into the text.
55. Vincent of Beauvais, *Speculum doctrinale* ll.105–33, discussed fully in Whitney, "Paradise Restored," pp. 117–40.
56. Newman, "Technology and Alchemical Debate in the Late Middle Ages," p. 443, notes that these alchemical works of the thirteenth century comprised "a propagandistic literature of technological development." Muscatine characterizes the soulless technology of alchemy as a by-product of imitating God as creator, p. 216.

Chapter 4 Monstrous Body Politic(s): Alexander in the *Confessio Amantis*

1. Robert F. Yeager, ed. and trans., *John Gower: The Minor Latin Works* (Kalamazoo, Mich.: Medieval Institute, 2005).
2. John Gower, *Confessio Amantis*, 5.2031–2224. Unless otherwise noted, all references to the *Confessio Amantis* are from *The English Works of John Gower*,

- ed. G. C. Macaulay, 2 vols. EETS O.S. 81 (Oxford: Oxford University Press, 1900); on kingship, see Russell Peck, *Kingship and Common Profit* in John Gower's *Confessio Amantis* (Carbondale and Edwardsville: Southern Illinois University Press, 1978), pp. 106–8; Elizabeth Porter, "Gower's Ethical Microcosm and Political Macrocosm," in *Gower's Confessio Amantis: Responses and Reassessments*, ed. A. J. Minnis (Cambridge: D.S. Brewer, 1983), p. 147.
3. Seth Lerer contrasts the hollow manipulation of surface effects with beneficial musical artistry, which has the potential to move the spirit, in effect synchronizing humanity with the music of the spheres through art, imbuing "the technical language of decorative and musical crafts with a moral sense," in "Artifice and Artistry in 'Sir Orfeo,'" *Speculum* 60 (1985): 93.
4. Peck, *Kingship and Common Profit*, pp. 22–3; Gower's source was not Herodotus's *Persian Wars* (I.24) but Ovid, whose *Fasti* (trans. Frazier, Cambridge 1967, II.83–92) describes his role as peacemaker as well as providing the image of pirates; see also R. F. Yeager's thorough catalogue of the Arion story, including backgrounds in poetics and historical sources, in *John Gower's Poetic: The Search for a New Arion* (Suffolk: D.S. Brewer, 1990), pp. 237–44.
5. Anne Astell, *Political Allegory in Late Medieval England* (Ithaca: Cornell University Press, 1999), pp. 78–9; see also Macaulay's edition 2:xxi, Fisher, *John Gower*, pp. 116–22, and Peter Nicholson, "The Dedications of Gower's *Confessio Amantis*," *Medievalia* 10 (1984):159–80 and "Gower's Revisions in the *Confessio Amantis*," *Chaucer Review* 19 (1984): 123–43.
6. Astell, *Political Allegory in Late Medieval England*, p. 79. The 1391 appearance of a dolphin in the Thames during a magnificent Yuletide feast is taken by Astell to inspire the political context of Arion; see p. 77, n. 22, ref. to Thomas Walsingham, *Historia Anglicana (1381–1422)*, ed. Henry Thomas Riley, Rolls Series 28, no. 1 pt. 2 (London: Her Majesty's Stationery Office, 1864; repr.1965), p. 204.
7. Larry Scanlon, *Narrative, Authority, and Power: The Medieval Exemplum and the Chaucerian Tradition* (Cambridge: Cambridge University Press, 1994), pp. 250–4.
8. Perhaps most notably in Dante Alighieri, *Inferno* 12.107.
9. See Barron, "Quarrel," pp. 173–201; Kipling, *Enter the King*, pp. 12–21.
10. Fisher, *John Gower*, pp. 118–22; Lynn Staley, "Gower, Richard II, Henry of Derby, and the Business of Making Culture," *Speculum* 75 (2000): 79–80
11. Gower's sources for the Alexander material in the *Confessio Amantis* are from the Romance or Pseudo-Callisthenes MS tradition, a collection of historically inaccurate, highly fanciful and deeply influential accounts of the young king's exploits. Gower's direct sources from this tradition include Thomas of Kent's *Roman de Toute Chevalerie*, the French *Roman d'Alexandre* and the Latin *Historia de preliis*, and the *Res gestae Alexandri Macedonis*.
12. The idea of Mankind the Toolmaker is central to the understanding of the system of linear time Augustine establishes as the historical paradigm for western Christendom. This notion is essentially prosthetic, since technology

- is seen as a positive recovery from the weakened estate of man after the fall. See Ovitt, *Restoration of Perfection*, pp. 49–51.
13. George Cary, *The Medieval Alexander*, ed. D. J. A. Ross (Cambridge: Cambridge University Press, 1956), p. 252.
 14. Perhaps the best catalogue of the Alexander material available in medieval England is in Frank Grady's *The Literary and Political Recuperation of Pagan Virtue in the English Middle Ages* (Ph.D. Dissertation, Berkeley: University of California, 1991), pp. 97–100, expanded in his thorough and genial *Representing Righteous Heathens in Late Medieval England* (New York: Palgrave Macmillan, 2005), pp. 76–81; with specific reference to Gower's selections, pp. 116–8.
 15. James Romm, ed., *Alexander the Great: Selections from Arian, Plutarch, an Quintus Curtius*, trans. Pamela Mensch and James Romm (Cambridge: Hackett Publishing Company, 2005), pp. xvi–viii offers a succinct list of the basic forms taken by Alexander in the literature of the classical and late antique periods preceding the development of his *legenda* in medieval Europe.
 16. Frank L. Holt, *Alexander the Great and the Mystery of the Elephant Medallions* (Berkeley: University of California Press, 2003), p. 117. Holt's numismatic study traces the iconography of supernatural powers attributed to the Macedonian king.
 17. Augustine, *City of God* 4.4; Dante (see note 8 earlier) consigns Alexander to the seventh circle, reserved for tyrants and pirates.
 18. Grady, *Representing Righteous Heathens*, p. 80.
 19. Peck, *Kingship and Common Profit*, pp. 22–3, 170.
 20. Diane Watt, *Amoral Gower*, p. 108 after Dean, *World Grown Old*, p. 257.
 21. Grady, *Representing Righteous Heathens*, p. 118, my italics.
 22. Siân Echard and Claire Fanger, trans., *The Latin Verses in the Confessio Amantis: An Annotated Translation* (East Lansing: Colleagues Press, 1991), pp. 68–9.
 23. See Claire Fanger, *Signs of Power and the Power of Signs: Medieval Modes of Address to the Problem of Magical and Miraculous Signifiers*, Ph.D. Dissertation (University of Toronto, 1993), pp. 280–1, n. 3 and 5; Fanger cites gluttony as the first sin through the “patristic commonplace” evidenced in Cassian (*Collationes*, c.4, PL 49, 612), Chrysostom (*Homiliae ad Mattaeum*, XII.1, PG 57,209), and Gregory (*Homiliae in evangelia*, 16.2, PL 76, 136).
 24. For full references, see chapter 1 in this book.
 25. Cary, *Medieval Alexander*, pp. 146–7, 253–4 cites several analogues including the *Gesta Romanorum* 61 and *Disciplina clericalis* 28, suggesting that Walter Burley's exemplar form is Gower's source.
 26. The marvelous aspects of the Alexander legend were widespread in England during the fourteenth and fifteenth centuries. See R. M. Lumiansky, “Legends of Alexander the Great,” in *A Manual of the Writings in Middle English, 1050–1500*, v.1, ed. J. B. Severs (New Haven: Connecticut Academy of Arts and Sciences, 1967), pp. 105–13. See G. H. V. Bunt, “The Story of Alexander the Great in the Middle English Translation of

- Higden's Polychronicon," in *Vincent of Beauvais and Alexander the Great*, ed. W. J. Aerts, E. R. Smith, and J. B. Voorbij (Groningen: Egbert Forsten, 1986), pp. 127–40.
27. *The Wars of Alexander*, ed. Hoyt N. Duggan and Thorlac Turville-Petre (Oxford: Early English Text Society, 1989). The *Wars* text postdates the *Confessio* by three decades, but as a late English copy of a lost MS from the manuscript tradition of Gower's sources, it is interesting both as an English translation and as a roughly contemporary exemplar of Gower's Latin source, edited as *The History of Alexander's Battles (Historia de Preliis—the J1 Version)*, trans. and ed. R. Telfryn Pritchard (Toronto: Pontifical Institute of Medieval Studies, 1992).
 28. Annunciation analogues have been proposed by Peter Beidler, *John Gower's Literary Transformation in the Confessio Amantis: Original Articles and Translations* (Washington D.C.: University Press of America, 1982), pp. 83–90 and Patrick Gallacher, *Love, the Word and Mercury: A Reading of John Gower's Confessio Amantis* (Albuquerque: University of New Mexico Press, 1975), pp. 40–3.
 29. The Pseudo-Callisthenes manuscript tradition of this birth narrative forms an ironic corollary to the historical account of the king's lineage. In the histories Alexander is berated for and reacts violently to the suggestion of his sorcerous lineage, but in contrast to his support for his mother in the Pseudo-Callisthenes MS tradition.
 30. This image is typical of the Pseudo-Callisthenes tradition of manuscript illumination, which was used in MS Bodley 264 and most of the French MSS illustrating the scene, as exemplified in Fig. 4.1; see Cary, *Medieval Alexander*, p. 47 and David J. A. Ross, *Alexander Historiatus: A Guide to Medieval Illustrated Alexander Literature* (Atheneum: Frankfurt, 1988), p. 22.
 31. See, e.g., the many images of Nectanabus and Philip, in which Nectanabus is either accompanied by or illustrated through a representation of a dragon; see Cary, *Medieval Alexander*, p. 47 and Ross, *Alexander Historiatus*, p. 22.
 32. *The History of Alexander the Great: An Illuminated Manuscript of Vasco da Lucena's French Translation of the Ancient Text by Quintus Curtius Rufus*, ed. Scott McKendrick (Los Angeles: J. Paul Getty Museum, 1996), Plate 2, pp. 72, 74.
 33. Thomas of Kent's Account of the Birth of Alexander, trans. Patricia Innerbichler De Bellis, in Beidler, *John Gower's Literary Transformations*, p. 111. De Bellis's text is translated from the French editions of Paul Meyer, *Alexander le Grand dans la littérature française du moyen âge* (Paris 1886), pp. 195–221.
 34. *Historia Alexandri Magni (historia de preliis), Rezension j1*, ed. Alfons Hilka and Karl Steffens, *Beiträge zur Klassischen Philologie* (Meisenheim: Anton Hain, 1979), p. 248; Pritchard, *Historia de preliis*, p. 118.
 35. On the matter of Gower's reference-practices, George R. Fox's main line of comment upon Gower's understanding of science is limited by his expectation that Gower should display specific knowledge, rather than reference his encyclopedic interests with the expectation that readers would fill in the details unnecessary to his narrative. Fox's general judgment that

- Gower knew little of science says more about the critic's expectations than of the author's knowledge or intentions.
36. Beidler, *John Gower's Literary Transformations*, p. 113.
 37. Julius Valerius, *Res gestae Alexandri Macedonis*, trans. Edna S. DeAngeli in Beidler, *John Gower's Literary Transformations*, and is based on the Teubner text, *Iuli Valeri Alexandri Polemi res gestae Alexandri Macedonis translatae ex Aesopo Graeco*, ed. Bernard Kuebler (Leipzig: Teubner, 1888), p. 137.
 38. Peter Comestor (*Historia scholastica*, liber Danielis 7, PL 298, col.1456A), Latin qtd. in Cary *Medieval Alexander*, p. 292, n. 42.
 39. See Cary, *Medieval Alexander*, p. 292, n. 41, quoting PL 5.25.
 40. Cary holds this narrative to be of definitive importance to the medieval conception of Alexander. The *Iter ad Paradisum* story was incorporated into the *Roman 'Alexandre* and the *Voyage au Paradis Terrestre*, among others, and was known to Gower and his contemporaries through French and Anglo-Norman sources. The breadth of this relationship is suggested in the Talmudic commentary on greed, *Tamid* 32.b., recounting the episode, in which Alexander receives a symbolic eye that outweighs all his riches.
 41. See David Wills's theoretical treatment in *Prosthesis* (Stanford: Stanford University Press, 1995); a general approach to prosthesis and subjectivity in Kirby Farrell, "Thinking through Others," *Massachusetts Review* 37 (1996); and the seminal essay on the divisions inherent in prosthesis in Donna J. Haraway, "A Cyborg Manifesto: Science, Technology, and Socialist Feminism in the Late Twentieth Century," in *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York: Routledge, 1991), pp. 149–82.
 42. The image of the Divine Eye reflecting the world was part of the late medieval iconography of the Seven Mortal Sins, pictured circling the part-colored iris of God's eye in the *Table of the Seven Deadly Sins* painted by Hieronymous Bosch ca. 1485.
 43. This passage is rendered from the Latin original as "He also saw there other astonishing sights that he would not disclose to anyone because men would not have believed them," in Pritchard, *Historia de preliis*, p. 115.
 44. In his study of the sexual politics of giants in medieval literature, Jeffrey Cohen makes a passing reference to Gower's account of the great Rising of 1381 in *Vox Clamantis*, noting that the rebels' bodies were represented "as hybrid freaks, beasts in men's bodies" in *Of Giants: Sex, Monsters and the Middle Ages* (Minneapolis: University of Minnesota Press, 1999), p. 112.
 45. *Vox Clamantis*, in *The Complete Works of John Gower*, ed. G. C. Macaulay (Oxford: Clarendon Press, 1899–1902), 2:2; *The Major Latin Works of John Gower: The Voice of One Crying and the Tripartite Chronicle*, trans. and ed. Eric W. Stockton (Washington, D.C.: University of Washington, 1962), pp. 56, 65. The "monsterization" of the craftsmen is thematically dominant throughout Gower's allegorical description of the events of the Uprising of 1381.
 46. Dean, *The World Grown Old*, p. 255. Dean refers to the centrality of this image for Gower through reference to the illustrations, which possibly were overseen by the poet. See also Peck, *Kingship and Common Profit*, p. 21.

47. Peck refers to Nebuchadnezzar's statue as the "monster of time" (*Kingship and Common Profit*, pp. 3, 21–2).
48. Ricardo J. Quinones, *The Changes of Cain: Violence and the Lost Brother in Cain and Abel Literature* (Princeton: Princeton University Press, 1991), Introduction.
49. Fox, in *The Mediaeval Sciences in the Works of John Gower*, implies a structural break for the scientific discourse; George R. Coffman, "John Gower in His Most Significant Role," in *Elizabethan Studies and Other Essays in Honor of George F. Reynolds* (Boulder: University of Colorado, 1945) suggests the centrality of this section while confirming its difference from the main thrust of the *Confessio*; Fisher, *John Gower*, emphasizes the centrality of the scientific material as part of the education of a king.
50. Another instance in which Alexander's body exhibits the physical manifestation of symbolic action is in medieval representations of his battles with Porus. There Alexander is represented in diminished stature, his height contrasted with the monstrous gigantism of Porus in a scene reminiscent of the biblical narrative of David and Goliath; see David Williams, *Deformed Discourse: The Function of the Monster in Mediaeval Thought and Literature* (Montreal: McGill-Queen's University Press, 1996), p. 237.
51. Trans. R. S. Pine-Coffin (New York: Penguin, 1961), p. 242.

Chapter 5 Craft and Idolatry: "Sotylle" Devices in Mandeville's *Travels*

1. Rosemary Tzanaki, *Mandeville's Medieval Audiences: A Study on the Reception of the Book of Sir John Mandeville (1371–1550)* (Hampshire, England: Ashgate, 2003), pp. 272–3. Tzanaki details Mandeville's growing reputation among the French as a "respected man of science" but maintains that English audiences primarily viewed his work as a book of marvels.
2. I observe the convention of differentiating between author and narrator by referring to Mandeville in reference to events within the text, and to the author when referencing the text itself.
3. Iain MacLeod Higgins, *Writing East: The "Travels" of Sir John Mandeville* (Philadelphia: University of Pennsylvania Press, 1997), p. 229.
4. The seminal work on travel, pilgrimage and curiosity is Christian K. Zacher's *Curiosity and Pilgrimage: The Literature of Discovery in Fourteenth-Century England* (Baltimore: Johns Hopkins, 1976); see also his "Travel and Geographical Writings," in *A Manual of the Writings in Middle English, 1050–1500*, ed. Albert E. Hartung (New Haven: Connecticut Academy of Arts and Sciences, 1986), pp. 2235–54; and Donald R. Howard, *Writers and Pilgrims* (Berkeley: University of California, 1980).
5. *Mandeville's Travels*, ed. M. C. Seymour (Oxford: Oxford University Press, 1967), p. 219. Except where noted, all subsequent quotations from Mandeville's *Travels* refer to this edition.
6. Zacher first highlighted the importance of the *Travels* as a combination of discourses, an idea Higgins takes as the central theme of his work, pp. 131–2.

7. Michael Uebel, in "Imperial Fetishism: Prester John among the Natives," in *The Postcolonial Middle Ages*, ed. Jeffrey Jerome Cohen (New York: St. Martin's, 2000), pp. 261–82, makes powerful claims for the hold the Prester John's Land and other eastern sites of *mirabilia* held for the western imagination, but I feel that the productive comparisons to be found amongst Mandeville's marvels are perhaps even more intimate to the western experience of manmade courtly marvels and wonders.
8. Donald R. Howard, "The World of Mandeville's Travels," *Yearbook of English Studies* 1 (1971): 10: "Though he is often viewed as an early geographer, his interest in distant lands has little to do with space." Howard describes the roughly semicircular trajectories of Mandeville's *Travels*, but insists that the author had no map or other image with which to organize his work, suggesting that the arrangement was textual rather than graphic.
9. Evelyn Edson, *Mapping Time and Space: How Medieval Mapmakers Viewed Their World*. British Library Studies in Map History 1 (London: British Library, 1997), p. 140.
10. Edson, *Mapping Time and Space*, pp. 139–40.
11. Howard, "The World of Mandeville's Travels," p. 11.
12. The assumption that Mandeville referenced a map similar to that at Hereford or in the *Polychronicon* is based on arguments summed up in Zacher, *Curiosity and Pilgrimage*, p. 135, and Higgins, *Writing East*, p. 257–9.
13. This work, which appears under a range of roughly similar titles, will be referred to as the *Itinerarium Mirabilibus*. For a complete list of manuscripts containing the work, see Henry Yule's bibliography in *Cathay and the Way Thither: Being a Collection of Medieval Notices of China*. 4 vols. (New Delhi: Munshiram Manoharlal Publishers, 1916), ii, pp. 39–41.
14. Yule, ed., *Cathay*, on *Odoric* v. ii, p. 222; for Latin and French versions, see Yule's note 1.
15. Mandeville's *Travels*, ed. Seymour, p. 157.
16. Howard, *Writers and Pilgrims*, p. 76; "World of Mandeville's Travels," p. 10.
17. Mandeville's *Travels*, ed. Seymour, p. 157.
18. Zacher, *Curiosity and Pilgrimage*, p. 143.
19. Dante's *Purgatorio* 29 (ll.130–2) refers to Prudence as a three-eyed woman riding the chariot of the church, and Criseyde in Chaucer's *Troilus* 5 (ll.744–5) alludes to lack of foresight when she claims to lack one of Prudence's "eyen thre." See *Riverside Chaucer*, p. 1052, n. 744–9.
20. Mandeville's *Travels*, ed. Seymour, p. 157.
21. Quoted in Higgins, *Writing East*, p. 165. Higgins's analysis of the Mandeville-author's alteration of source-rhetoric accounts for changes, but in following too closely Zacher's argument on the passage, focuses on the number of eyes rather than on their conceptual and grammatical contexts.
22. Malcolm Letts, *Sir John Mandeville: The Man and His Book*. (London: Batchworth Press, 1949), p. 67, alludes to the unabbreviated comparison, suggesting that in the conflation of *Odoric* and *Hayton* source materials, the only aspect of the passage that is purely Mandeville's own is the bit about "besyness."

23. Galfridus Anglicus, *The Promptorium Parvulorum: The First English-Latin Dictionary*, ed. from the manuscript in the Chapter Library at Winchester, ed. A. L. Mayhew (London: Truebner, 1908).
24. A similar example occurs in the seventh book of Mandeville's *Travels*, p. 36.
25. The term is cognate with Lat. *magister* in forms denoting ideas of command or instruction, although in some forms perhaps connoting a sense of private or esoteric mastery; in the main, however, a term denoting the command of servants and apprentices.
26. Pamela O. Long, *Openness, Secrecy, Authorship*, p. 89.
27. M. C. Seymour, ed., *The Defective Version of Mandeville's Travels*, EETS N.S. 319 (Oxford: Oxford University Press, 2002), p. 99, ll. 8–14.
28. *Mandeville's Travels, Translated from the French of Jean D'Outremeuse*, ed. P. Hamelius EETS O.S. 153–4 (London: Kegan Paul, 1919) i., p. 156.
29. Mandeville's *Travels*, ed. Seymour, p. 156.
30. Note, e.g., the commodification of relics in the medieval west in narratives such as Chaucer's *Pardoner's Tale*; for an account of the commodification of relics among the monastic culture of the Middle Ages, see Patrick J. Geary, *Furta Sacra: Theft of Relics in the Central Middle Ages* (Princeton: Princeton University Press, 1978), esp. Chapter 3.
31. Higgins, *Writing East*, p. 193.
32. By contrast, Odoric locates the Old Man's fortress very specifically, with no attempt at rhetorical distancing in the account.
33. Mandeville's *Travels*, ed. Seymour, p. 200.
34. Mandeville's *Travels*, ed. Seymour, p. 201.
35. Odoric, *Relatio*, p. 222.
36. "Leviticus," *Biblia sacra iuxta Vulgatam versionem*, ed. O. S. B. Robert Weber, 2nd ed., 2v. (Stuttgart, 1975): 20.24.
37. See chapters 1 and 2 in this book.
38. Higgins, *Writing East*, p. 69 et passim, details the extensive reworking of source material in these chapters but does not address their function in the overall structure of the *Travels*.
39. Uebel, "Imperial Fetishism," pp. 261–82.
40. Dean, *The World Grown Old*, pp. 120–1.
41. For a fuller treatment of the Seth story in medieval literature, see James M. Dean, "Vestiges of Paradise: The Tree of Life in Cursor Mundi and Malory's Morte D'Arthur," *Medievalia-et-Humanistica* 13 (1985): 113–26; and Esther Quinn, *The Quest of Seth for the Oil of Life* (Chicago: University of Chicago Press, 1962).
42. See chapter 4 in this book.

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